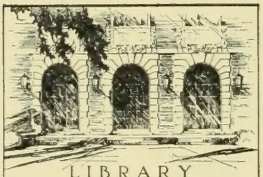

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THE EARTH AND ITS INHABITANTS

THE

UNIVERSAL GEOGRAPHY

By ÉLISÉE RECLUS

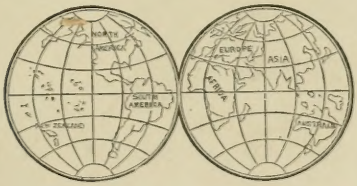
EDITED

By E. G. RAVENSTEIN, F.R.G.S., F.S.S., Etc.

VOL. I.

SOUTHERN EUROPE

(GREECE, TURKEY IN EUROPE, RUMANIA, SERVIA, ITALY, SPAIN AND PORTUGAL)



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A UNIVERSAL GEOGRAPHY.

INTRODUCTORY REMARKS.*

UR earth is but as an atom in space, a star amongst stars. Yet, to us who inhabit it, it is still without bounds, as it was in the time of our barbarian ancestors. Nor can we foresee the period when the whole of its surface will be known to us. We have been taught by astronomers and geodesists that our planet is a sphere flattened at the poles, and physical geographers and meteorologists have applied their powers of inductive reasoning to establish theories on the direction of the winds and ocean currents within the polar regions. But hitherto no explorer has succeeded in reaching the extremities of our earth, and no one can tell whether land or sea extends beyond those icy barriers which have frustrated our most determined efforts. Thanks to the struggles of indomitable seamen, the pride of our race, the area of the mysterious regions around the north pole has been reduced to something like the hundredth part of the earth's surface, but in the south there still remains an unknown region of such vast extent, that the moon, were she to drop upon our planet, might disappear within it without coming into contact with any part of the earth's surface already known to us.

And the polar regions, which present so many natural obstacles to our explorers, are not the only portions of the earth not yet known to men of science. It may be humiliating to our pride as men, but we feel constrained to admit that among the countries not yet known to us there are some, accessible enough as far as natural obstacles are concerned, but closed against us by our fellow-men! There are peoples in this world, dwelling in towns, obeying laws, and having customs comparatively polished, but who choose to live in seclusion, and are as little known to us as if they were the inhabitants of some other planet. Their frontiers are closed by war and its horrors, by the practice of slavery, by religious

* Houzeau, "Histoire du Sol de l'Europe."—Carl Ritter, "Europa."—Kohl, "Die Geographische Lage der Haupstadte Europa's."

fanaticism, and even commercial jealousy. We have heard of some of these peoples by vague report, but there are others concerning whom we absolutely know nothing. And thus it happens that in this age of steam, of the printing press, of incessant and feverish activity, we still know nothing, or very little, of the centre of Africa, of a portion of Australia, of the interior of that fine and no doubt most fertile island of New Guinea, and of vast table-lands in the centre of Asia. Nay, even the country which most men of learning love to look upon as the cradle of our Aryan ancestors is known to us but very imperfectly.

As regards most countries which have been visited by travellers, and figure more or less correctly upon our maps, a great amount of further research is required before our knowledge of their geography can be called complete. Years will pass ere the erroneous and contradictory statements of our explorers concerning them have been set right. A prodigious amount of labour must be performed before their climate, their hydrography, their plants and animals, can be thoroughly known to us. Minute and systematic researches have to be conducted to elucidate the slow changes in the aspects and physical phenomena of many countries. The greatest caution will have to be exercised in distinguishing between changes due to the spontaneous action of natural causes and those brought about by the hand of man. And all this knowledge we must acquire before we can boast that we know the earth, and all about it!

Nor is this all. By a natural bent of our mind, all our studies are carried on with reference to Man as the centre of all things. A knowledge of our planet is, therefore, imperfect as long as it is not joined to a knowledge of the various races of man which inhabit it. The earth which man treads is but imperfectly known, man himself even less so. The first origin of races is shrouded in absolute darkness, and the most learned disagree with reference to the descent, the amalgamation, the original seats, and migratory stages of most peoples and tribes. What do men owe to their surroundings? What to the original seats of their ancestors, to inborn instincts of race, to a blending with alien races, or to influences and traditions brought to bear upon them from beyond? We hardly know, and as yet only a few rays of light begin to penetrate this darkness. Unfortunately our erroneous views on many of these questions are not due solely to ignorance. Contending passions and instinctive national hatreds too frequently obscure our judgment, and we see man as he is not. The far-off savages assume the shape of dim phantoms, and our near neighbours and rivals in the arts of civilisation appear repulsive and deformed of feature. If we would see them as they really are, we must get rid of all our prejudices, and of those feelings of contempt, hatred, and passion which still set nation against nation. Our forefathers, in their wisdom, said that the most difficult thing of all was to know one's self. Surely a comprehensive study of mankind is more difficult still.

We are thus not in a position at present to furnish a complete account of the earth and its inhabitants. The accomplishment of this task we must leave to the future, when fellow-workers from all quarters of the globe will meet to write the grand book embodying the sum of human knowledge. For the present an

individual author must rest content with giving a succinct account of the Earth, in which the space occupied by each country shall be proportionate to its importance, and to the knowledge we possess with respect to it.

It is natural, perhaps, that each nation should imagine that in such a description it ought to be accorded the foremost place. Every barbarous tribe, however small, imagines itself to occupy the very centre of the earth, and to be the most perfect representative of the human race. Its language never fails to bear witness to this naïve illusion, born of the very narrowness of its horizon. The river which irrigates its fields is called the "Father of Waters," the mountain which shelters its camp the "Navel," or "Centre of the Earth;" and the names by which primitive races designate their neighbours are terms of contempt, for they look down upon them as their inferiors. To them they are "mute," "deaf," "unclean," "imbecile," "monstrous," or "demoniac." The Chinese, one of the most remarkable peoples in some respects, and certainly the most important of all as far as mere numbers go, are not content with having bestowed upon their country the epithet of "Flower of the Centre," but are so fully convinced of its superiority as to have fallen into the mistake (very excusable under the circumstances) of deeming themselves to be the "Sons of Heaven." As to the nations thinly scattered around the borders of their "Celestial Empire," they know them merely as "dogs," "swine," "demons," and "savages." Or, more disdainful still, they designate them by the four cardinal points of the compass, and speak of the "unclean" tribes of the west, the north, the east, and the south.

If in our description of the Earth we accord the first place to civilised Europe, it is not because of a prejudice similar to that of the Chinese. No! this place belongs to Europe as a matter of right. Europe as yet is the only continent the whole of whose surface has been scientifically explored. It possesses a map approximately correct, and its material resources are almost fully known to us. Its population is not as dense as that of India or of China, but it nevertheless contains about one-fourth of the total population of the globe; and its inhabitants, whatever their failings and vices, or their state of barbarism in some respects, still impel the rest of mankind as regards material and mental progress. Europe, for twenty-five centuries, has been the focus whence radiated Arts, Sciences, and Thought. Nor have those hardy colonists who carried their European languages and customs beyond the sea succeeded hitherto in giving to the New World an importance equal to that of "little" Europe, in spite of the virgin soil and vast area which gave them scope for unlimited expansion.

Our American rivals may be more active and enterprising than we are—they certainly are not cumbered to the same extent by the traditions and inheritances of feudal times—but they are as yet not sufficiently numerous to compete with us as regards the totality of work done. They have scarcely been able hitherto to ascertain the material resources of the country in which they have made their home. "Old Europe," where every clod of earth has its history, where every man is the heir of a hundred successive generations, therefore still maintains the first place, and a comparative study of nations justifies us in the belief that its moral

ascendancy and industrial preponderance will remain with it for many years to come. At the same time, we must not shut our eyes to the fact that equality will obtain in the end, not only between America and Europe, but also between these two and the other quarters of the world. The intermingling of nations, migrations which have assumed prodigious proportions, and the increasing facilities of intercourse must in the end lead to an equilibrium of population being established throughout the world. Then will each country add its proper share to the wealth of mankind, and what we call civilisation will have "its centre everywhere, its periphery nowhere."

The central geographical position of Europe has undoubtedly exercised a most favourable influence upon the progress of the nations inhabiting it. The superiority of the Europeans is certainly not due to the inherent virtues of the races from which they sprang, as is vainly imagined by some, for in other parts of the ancient world these same races have exhibited far less creative genius. To the happy conditions of soil, climate, configuration, and geographical position the inhabitants of Europe owe the honour of having been the first to obtain a knowledge of the earth in its entirety, and to have remained for so long a period at the head of mankind. Historical geographers are, therefore, right when they insist upon the influence which the configuration of a country exercises upon the nations who inhabit it. The extent of table-lands, the heights of mountain ranges, the direction and volume of rivers, the vicinity of the ocean, the indentation of the coast-line, the temperature of the air, the abundance or rarity of rain, and the correlations between soil, air, and water—all these are pregnant with effects, and explain much of the character and mode of life of primitive nations. They account for most of the contrasts existing between nations subject to different conditions, and point out the natural highways of the globe which nations are constrained to follow in their migrations or warlike expeditions.

At the same time, we must bear in mind that the influence exercised upon the history of mankind by the general configuration of land and sea, or any special features of the former, is subject to change, and depends essentially upon the stage of culture at which nations have arrived. Geography, strictly speaking, confines itself to a description of the earth's surface, and exhibits the various nations in a passive attitude as it were, whilst Historical Geography and statistics show man engaged in the struggle for existence, and striving to obtain the mastery over his surroundings. A river, which to an uncultured tribe would constitute an insurmountable barrier, becomes a commercial high-road to a tribe further advanced in culture, and in process of time it may be converted into a mere canal of irrigation, the course of which is regulated by man. A mountain range frequented by shepherds and huntsmen, and forming a barrier between nations, may attract, in a more civilised epoch, the miner and the manufacturer, and in course of time will even cease to be an obstacle, as roads will traverse it in all directions. Many a creek of the sea, which afforded shelter of yore to the small vessels of our ancestors, is deserted now, whilst the open bays, which vessels dreaded formerly, have been protected by enormous breakwaters, and have become the resort of our largest ships.

Innumerable changes such as these have been effected by man in all parts of the world, and they have revolutionised the correlations existing between man and the land he lives in. The configuration and height of mountains and table-lands, the indentation of the coasts, the disposition of islands and archipelagos, and the extent of the ocean—these all lose their relative influence upon the history of nations in proportion as the latter emancipate themselves and become free agents. Though subject to the condition of his dwelling-place, man may modify it to suit his own purpose; he may overcome nature as it were, and convert the energies of the earth into domesticated forces. As an instance we may point to the elevated table-lands of Central Asia, which now separate the countries and peninsulas surrounding them, but which, when they shall have become the seats of human industry, will convert Asia into a real geographical unit, which at present it is only in appearance. Massy and ponderous Africa, monotonous Australia, and Southern America with its forests and waterfalls, will be put on something like an equality with Europe, whenever roads of commerce shall cross them in all directions, bridging their rivers, and traversing their deserts and mountain ranges. The advantages, on the other hand, which Europe derives from its backbone of mountains, its radiating rivers, the contours of its coasts, and its generally well-balanced outline are not as great now as they were when man was dependent exclusively upon the resources furnished by nature.

This gradual change in the historical importance of the configuration of the land is a fact of capital importance which must be borne in mind if we would understand the general geography of Europe. In studying SPACE we must take account of another element of equal value—TIME.

EUROPE.

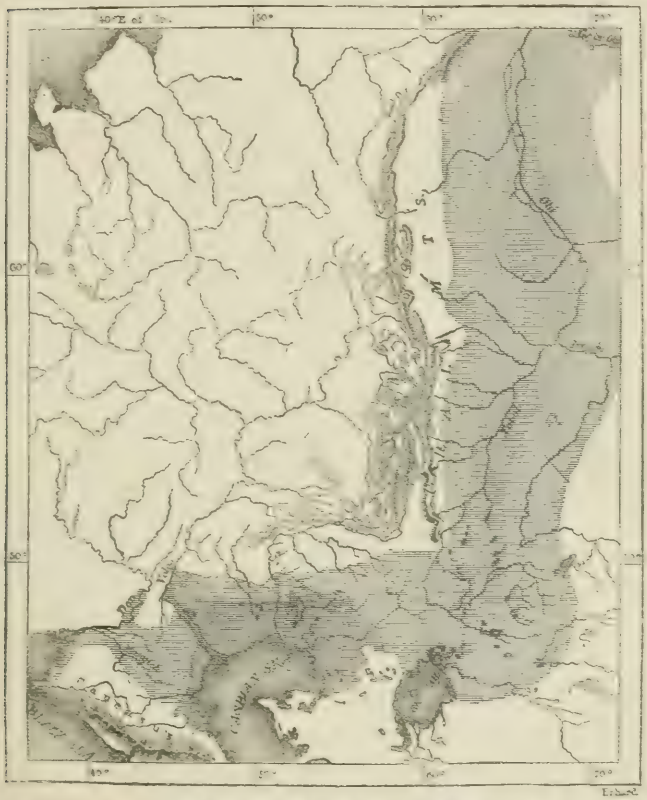
I.—Extent and Boundaries.

THE dwellers on the eastern shores of the Mediterranean Sea must have learnt, in the course of their first warlike and commercial expeditions, to distinguish between the great continents; for within the nucleus of the ancient world Africa is attached to Asia by a narrow band of arid sand, and Europe separated from Asia Minor by seas and channels difficult to navigate on account of dangerous currents. The division of the known world into three distinct parts could not fail to impress itself upon the minds of those infant nations, and when the Greeks had attained a state of maturity, and historical records took the place of myths and oral traditions, the name of Europe had probably been transmitted through a long series of generations. Herodotus naïvely admits that no mortal could ever hope to find out the true meaning of this name, bequeathed to us by our forefathers; but this has not deterred our modern men of learning from attempting to explain it. Some amongst them consider that it was applied at first to Thrace with its "large plains," and subsequently extended to the whole of Europe; others derive it from one of the surnames of Zeus with the "large eyes," the ancient god of the Sun, specially charged with the protection of the continent. Some etymologists believe that Europe was designated thus by the Phœnicians, as being the country of "white men." We consider it, however, to be far more probable that its name originally meant simply "the West," as contrasted with Asia, "the East," or "country of the rising sun." It is thus that Italy first, and then Spain, bore the name of Hesperia; that Western Africa received the name of El Maghreb from the Mohammedans, and the plains beyond the Mississippi became known in our own times as the "Far West."

But, whatever may be the original meaning of its name, Europe, in all the myths of the ancients, is described as a Daughter of Asia. The Phœnicians were the first to explore the shores of Europe, and to bring its inhabitants into contact with those of the East. When the Daughter had become the superior of her

Mother in civilisation, and Greek voyagers were following up the explorations begun by the mariners of Tyre, all the known countries to the north of the Mediterranean were looked upon as deep recesses of Europe, and that name, which was originally confined to the Thraco-Hellenic peninsula, was made to include, in course of time, Italy, Spain, the countries of the Gauls, and the hyperborean

Fig. 1.—The Natural Boundary of Europe.
Scale 1 : 20,500,000.



The zone of depression extending from the Black Sea to the Gulf of Ob is shaded. The darker shade to the north of the Caspian shows the area depressed below the level of the Mediterranean.

50 Miles.

regions beyond the Alps and the Danube. Strabo, to whom were known already the most varied and fruitful portions of Europe, extends it eastward as far as the Palus Mœotis and the Tanais.*

* Modern Sea of Azof and River Don.

Since that epoch the limits between Europe and Asia have been shifted by geographers still farther to the east. They are, however, more or less conventional, for Europe, though bounded on three sides by the ocean, is in reality but a peninsula of Asia. At the same time, the contrasts between these two parts of the world fully justify scientific men in dividing them into two continental masses. But where is the true line of separation between them? Map-makers generally adopt the political boundaries which it has pleased the Russian Government to draw between its vast European and Asiatic territories, and others adopt the summits of the Ural Mountains and of the Caucasus as the boundary

Fig. 2.—The Relief of Europe.
According to Houzeau, Berghaus, Kiepert, Olsen, and others. Scale 1 : 60,000,000

Land up to 650 feet above Sea Level
Sea less than 650 feet in depth.
Land depressed below level of Mediterranean.
Sea more than 1300 feet in depth

between the two continents; and although, at the first glance, this delineation appears more reasonable than the former, it is in reality no less absurd. The two slopes of a mountain chain can never be assigned to different formations, and they are generally inhabited by men of the same race. The true line of separation between Europe and Asia does not consist of mountains at all, but, on the contrary, of a series of depressions, in former times covered by a channel of the sea which united the Mediterranean with the Arctic Ocean. The steppes of the Manych, between the Black Sea and the Caspian, and to the north of the Caucasus, are still covered in part with salt swamps. The Caspian itself, as well as Lake Aral and the other lakes which we meet with in the direction of the Gulf of Obi, are the remains of this ancient arm of the sea, and the intermediate regions still bear the traces of having been an ancient sea-bed.

There can be no doubt that vast changes have taken place in the configuration

of Europe, not only during more ancient geological periods, but also within comparatively recent times. We have already seen that a vast arm of the sea formerly separated Europe from Asia; it is equally certain that there was a time when it was joined to Anatolia by an isthmus, which has since been converted into the Bosphorus of Constantinople; Spain was joined to Africa until the waters of the Atlantic invaded the Mediterranean; Sicily was probably connected with Mauritania; and the British Islands once formed a portion of the mainland. The erosion of the sea, as well as upheavals and subsidences of land, has effected, and still effect, changes in the contours of our coasts. Numerous soundings in the seas washing Western Europe have revealed the existence of a submarine plateau, which, from a geological point of view, must be looked upon as forming an integral portion of our continent. Bounded by abyssal depths of thousands of fathoms, and submerged one hundred fathoms at most below the waters of the ocean, this pedestal of France and the British Islands must be looked upon as the foundation of an ancient continent, destroyed by the incessant action of the waves. If the shallow portions of the ocean, as well as those of the Mediterranean Sea, were to be added to Europe, its area would be increased to the extent of one-fourth, but it would lose, at the same time, that wealth in peninsulas which has secured to Europe its historical superiority over the other continents.

If we supposed Europe to subside to the extent of one hundred fathoms, its area would be reduced to the compass of one-half. The ocean would again cover her low plains, most of which are ancient sea-beds, and there would remain above the waters merely a skeleton of plateaux and mountain ranges, far more extensively indented by bays and fringed by peninsulas than are the coasts existing at the present time. The whole of Western and Southern Europe would be converted into a huge island, separated by a wide arm of the sea from the plains of interior Russia. From an historical as well as a geological point of view, this huge island is the true Europe. Russia is not only half Asiatic on account of its extremes of temperature, and the aspect of its monotonous plains and interminable steppes, but is likewise intimately linked with Asia as regards its inhabitants and its historical development. Russia can hardly be said to have belonged to Europe for more than a hundred years. It was in maritime and mountainous Europe, with its islands, peninsulas, and valleys, its varied features and unexpected contrasts, that modern civilisation arose, the result of innumerable local civilisations, happily united into a single current. And, as the rivers descending from the mountains cover the plains at their foot with fertile soil, so has the progress accomplished in this centre of enlightenment gradually spread over the other continents to the very extremities of the earth.

II.—Natural Divisions and Mountains.

The Europe alluded to includes France, Germany, England, and the three Mediterranean peninsulas, and constitutes several natural divisions. The British Islands form one of these. The Iberian peninsula is separated scarcely less

distinctly from the remainder of Europe, for between it and France rises a most formidable range of mountains, the most difficult to cross in all Europe; and immediately to the north of it a depression, nowhere exceeding a height of 650 feet, extends from the Mediterranean to the Atlantic Ocean. The geographical unity of Europe is represented to the full extent only in the system of the Alps, and in the mountains of France, Germany, Italy, and the Balkan peninsula which are connected with it. It is there we must seek the framework of continental Europe.

The Alps, whose ancient Celtic name probably refers to the whiteness of their snowy summits, stretch in an immense curve, more than 600 miles in length, from the shores of the Mediterranean to the plains of the Danube. They consist in reality of more than thirty mountain masses, representing as many geological groups, and joined to each other by elevated passes; but their rocks, whether they be granite, slate, sandstone, or limestone, form one continuous rampart rising above the plains. In former ages the Alps were higher than they are now. This is proved by an examination of their detritus and of the strata disintegrated by natural agencies. But, whatever the extent of detrition, they still rise in hundreds of summits beyond the line of perennial snow, and vast rivers of ice descend from them into every upland valley. Looked at from the plains of Piedmont and Lombardy, these glaciers and snow-fields present the appearance of sparkling diadems encircling the mountain summits.

In the eastern portion of the Alpine system—that is to say, between the Mediterranean and Mont Blanc, the culminating point of Europe—the average height of the mountain groups gradually increases from 6,500 to more than 13,000 feet. To the east of Mont Blanc the Alps change in direction, and, beyond the vast citadels represented by Monte Rosa and the Bernese Oberland, they gradually decrease in height. To the east of Switzerland no summit exceeds a height of 13,000 feet, but this loss in elevation is fully made up by increase of breadth. And whilst the general direction of the principal axis of the Alps remains north-easterly, very considerable mountain chains, far exceeding the central mass in breadth, are thrown off towards the north, the east, and the south-east. A line drawn across the true Alps from Vienna has a length of no less than 250 miles.

In thus spreading out, the Alps lose their character and aspect. We no longer meet with grand mountain masses, glaciers, and snow-fields. Towards the north they gradually sink down into the valley of the Danube; towards the south they branch out into secondary chains, resting upon the arched plateau of Turkey. But, in spite of the vast contrasts offered by the true Alps and the mountains of Montenegro, the Hæmus, the Rhodope, and the Pindus, all these mountain chains nevertheless belong to the same orographical system. The whole of the Balkan peninsula must be looked upon as a natural dependency of the Alps; and the same applies to Italy, for the chain of the Apennines is nothing but a continuation of the Maritime Alps, and we hardly know where to draw the line of separation between them. The Carpathians, too, must be included among the

mountain chains forming part of the system of the Alps. They have been gradually separated from them through the continuous action of water, but there can be no doubt that, in former times, the semicircle of mountains known as the Little Carpathians, the Beskids, the Tatra, the Great Carpathians, and the Transylvanian Alps was joined, on the one hand, to the Austrian Alps, and on the other to spurs descending from the Balkan. The Danube has forced its way through these mountain ramparts, but the passages, or "gates," are narrow; they are strewn with rocks, and commanded by what remains of the ancient partition ranges.

The configuration of the Alps, and of the labyrinthine mountain ranges branching off from them towards the east, could not fail to exercise a most powerful influence upon the history of Europe and of the entire world. The only high-roads known to barbarians are those traced out by nature herself, and they were consequently able to penetrate into Europe only by sea, or through the vast plains of the north. Having penetrated to the westward of the Black Sea, their progress was first stopped by the lakes and difficult swamps of the Danubian valley; and, when they had surmounted these obstacles, they found themselves face to face with a barrier of high mountains, whose intricate wooded valleys and declivities led up to the inaccessible regions of eternal snow. The Alps, the Balkan, and all the other advanced chains of the Alpine system constituted an advanced defensive barrier for Western Europe, and the conquering nomad tribes who threw themselves against it did so at the risk of destruction. Accustomed to the boundless horizon of the steppes, they did not venture to climb these steep hills—they turned to the northward, where the vast plains of Germania enabled successive swarms of immigrants to spread over the country with greater ease. And as to the invaders, whom blind rage of conquest impelled to engage in the defiles of these mountains, they found themselves caught as in a trap; and this accounts for the variety of nations, and of fragments of nations, whose presence has converted the countries of the Danube into a sort of ethnological chaos. And as the débris carried along by the current is deposited in the eddy of a river, so were these fragments of nearly every nation of the East accumulated in motley disorder in this corner of the continent.

To the south of this great mountain barrier the migrations between Europe and Asia could take place only by sea—a high-road open to those nations alone who were sufficiently advanced in civilisation to have acquired the art of building ships. Whether pirates, merchants, or warriors, they had raised themselves long ago above a state of primitive barbarism, and even their voyages of conquest added something to the stock of human knowledge. Moreover, owing to the difficulties of navigation, they migrated only in small bodies. At whatever point they settled they came into contact with populations of a different race from their own, and this intercourse gave birth to a number of local civilisations, each bearing its own stamp, and nowhere did their influence preponderate. Every island of the Archipelago, and every valley of ancient Hellas, differed from its neighbours as regards social condition, dialect, and customs, but they all remained Greek, in spite of the Phœnician and other influences to which they had been subjected. It is thus owing to the

configuration of the mountain chains and coast-lines that the civilisation which developed itself gradually in the Mediterranean countries to the south of the Alps was, upon the whole, more spontaneous in its nature, and offered more variety and greater contrasts, than the civilisation of the far less advanced nations of the north, who were moving from place to place on vast plains.

The wide range of the Alps and of their advanced chains thus separated two distinct worlds, in which historical development went on at a different rate. At the same time, the separation between the two slopes of the Alpine system was by no means complete. Nowhere in the Alps do we meet with cold and uninhabited plateaux, as in the Andes and in Tibet, whose enormous extent forms almost insurmountable barriers. The Alpine masses are cut up everywhere into mountains and valleys, and the climate of the latter is sufficiently mild to enable man to exist in them. The mountaineers, who easily maintained their independence, owing to the protection extended to them by nature, first served as intermediaries between the peoples inhabiting the opposite lowlands. It was they who effected the rare exchanges of produce which took place between the North and South, and who opened the first commercial high-roads between the summits of the mountains. The direction of the valleys and the deeply cut mountain passes even then indicated the grand routes by which the Alps would be crossed, at a future period, for the purposes of commerce or of war. That portion of the Alps which lies between the mountain masses of Savoy and of the Mediterranean would naturally cease first to form an obstacle to military expeditions. The Alps there are of great height, it is true, but they are narrower than anywhere else; besides which, the climate on the two opposite slopes is similar, and assimilates the mode of life and the customs of the people dwelling there. Far more formidable, as a natural barrier, are the Alps to the north-east of Mont Blanc, for they constitute a climatic boundary.

The other mountain ranges play but a secondary or local part in the history of Europe, when we compare them with the Alps. Still, the influence which they have exercised upon the destiny of nations is no less evident. The table-lands and snow-fields of the Scandinavian Alps form a wall of separation between Norwegians and Swedes. The quadrangular mountain fort of Bohemia, in the centre of Europe, which shelters the Chechians, is almost entirely enclosed by Germans, and resembles an island fretted by the waves of the ocean. The hills of Wales and of Scotland have afforded a shelter to the Celtic race against the encroachments of Anglo-Saxons, Danes, and Normans. The Bretons, in France, are indebted to their rocks and *landes* for the fact of their not having yet become wholly French; whilst the table-land of Limousin, the hills of Auvergne, and the Cevennes constitute the principal cause of the striking contrast which still exists between the inhabitants of Northern and of Southern France. The Pyrenees, next to the Alps, constitute the most formidable obstacle to the march of nations in Europe; they would have remained an insurmountable rampart down to our own time, were it not easy to pass round them by their extremities abutting upon the sea.

III.—The Maritime Regions.

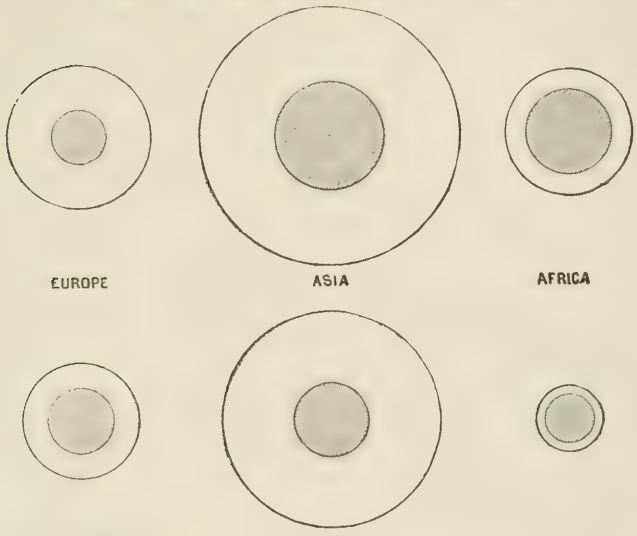
The valleys which radiate in all directions from the great central masses of the Alps are admirably adapted for imparting to almost the whole of Europe a remarkable unity, whilst they offer, at the same time, an extreme variety of aspects and of physical conditions. The Po, the Rhone, the Rhine, and the Danube traverse countries having the most diverse climates, and yet they have their sources in the same mountain region, and the fertilising alluvium which they deposit in their valleys results from the disintegration of the same rocks. Minor valleys cut up the slopes of the Alps and of their dependent chains, and carry towards the sea the waters of the mountains and the triturated fragments of their rocks. Running waters are visible, wherever we cast our eyes. There are neither deserts, nor sterile plateaux, nor inland lakes and river basins such as we meet with in Africa and Asia. The rivers of Europe are not flooded as are those of certain portions of South America, which deluge half the country with water. On the contrary, in the scheme of her rivers Europe exhibits a certain degree of moderation which has favoured the work of the settler, and facilitated the rise of a local civilisation in each river basin. Moreover, although most rivers are sufficiently large to have retarded migration, they are not sufficiently so to have arrested it for any length of time. Even when roads and bridges did not exist, barbarian immigrants easily made their way from the shores of the Black Sea to those of the Atlantic.

But Europe, in addition to the advantages due to its framework of mountains and the disposition of its river basins, enjoys the still greater advantage of possessing an indented coast-line. It is mainly the contours of its coasts which impart to Europe its double character of unity and diversity, which distinguish it amongst continents. It is "one" because of its great central mass, and "diversified" because of its numerous peninsulas and dependent islands. It is an organism, if we may say so, resembling a huge body furnished with limbs. Strabo compared Europe to a dragon. The geographers of the period of the revival of letters compared it to a crowned virgin, Spain being the head, France the heart, and England and Italy the hands, holding the sceptre and the orb. Russia, at that time hardly known, is made to do duty for the ample folds of the robe.

The area of Europe is only half that of South America, and one-third of that of Africa, and yet the development of its coast-lines is superior to that of the two continents taken together. In proportion to its area the coasts of Europe have twice the extent of those of South America, Australia, and Africa; and although they are to a small extent inferior to those of North America, it must be borne in mind that the arctic coasts of the latter are ice-bound during the greater portion of the year. A glance at the subjoined diagrams will show that Europe, as compared with the two other continents washed by the Arctic Ocean, enjoys the immense advantage of possessing a coast-line almost wholly available for purposes of navigation, whilst a large portion of the coasts of Asia and America is altogether useless to man. And not only does the sea penetrate into the very heart of

temperate Europe, cutting it up into elongated peninsulas, but these peninsulas, too, are fringed with gulfs and miniature inland seas. The coasts of Greece, of Thessaly, and of Thrace are thus indented by bays and gulfs, penetrating far into the land; Italy and Spain likewise possess numerous bays and gulfs; and the peninsulas of Northern Europe, Jutland and Scandinavia, are cut up by the waters of the ocean into numerous secondary peninsulas.

Fig. 3.—Development of Coast-lines relatively to Area.



	Europe.	Asia.	Africa.	N. America.	S. America.	Austr.lia.
Total area, square miles . .	4,005,100	17,308,400	11,542,400	9,376,850	6,803,570	3,450,130
Mainland ,, .	3,758,300	15,966,000	11,293,930	7,973,700	6,731,470	2,934,500
Development of coast-line, miles	18,600	34,110	16,480	30,890	16,390	10,570
Accessible coasts	17,610	28,200	16,480	26,510	16,390	14,400
Ratio of the geometrical to the actual contour . . .	1 : 2·5	1 : 2·5	1 : 1·4	1 : 3·1	1 : 1·8	1 : 1·7

The shaded circles represent the various continents; the outer circle represents the actual extent of coast-line. The blank space between the two concentric circles represents graphically the difference between the smallest possible or geometrical contour of a country having the area of the respective continents, and the actual contour as exhibited in the existing coast-lines. Europe, being in reality only a peninsula of Asia, hardly admits of this comparison.

The islands of Europe must be looked upon as dependencies of that continent, for most of them are separated from it only by shallow seas. Candia and the islands scattered broadcast over the Ægean Sea, the Archipelagos of the Ionian Sea, and of Dalmatia, Sicily, Corsica and Sardinia, Elba, and the Baleares, are in reality but prolongations, or maritime out-stations, of neighbouring peninsulas. To the islands of Sealand and Fyen, at the entrance to the Baltic, Denmark owes

most of her commercial and political importance. Great Britain and Ireland, which actually formed a portion of the European continent in a past age, cannot be looked upon otherwise than as dependencies of it, although the isthmus which once joined them has been destroyed by the waters of the ocean. England has actually become the grand commercial emporium of Europe, and plays now the same part in the world's commerce that Greece once played in that of the more restricted world of the Mediterranean.

It is a remarkable fact that each of the European peninsulas should have enjoyed in turn a period of commercial preponderance. Greece, the "most noble individuality of the world of the ancients," came first, and when at the height of her power governed the Mediterranean, which at that time meant nearly the whole universe. During the Middle Ages Amalfi, Genoa, and Venice became the commercial agents between Europe and the Indies. The discovery of a passage round the Cape and of America diverted the world's commerce to Cadiz, Seville, and Lisbon, on the Iberian peninsula. Subsequently the merchants of the small Dutch Republic seized a portion of the heritage of Spain and Portugal, and the wealth of the entire world was floated into the harbours of their sea-bound islands and peninsulas. In our own days Great Britain, thanks to its favourable geographical position, in the very centre of great continental masses, and the energy of its people, has become the great mart of the world. London, the most populous city of the world, is also the great centre of attraction for the treasures of mankind; but there can be no doubt that sooner or later it will be supplanted, in consequence of the opening of new commercial high-roads, and changes in the political preponderance of nations. Perhaps some city of the United States will take the place of London in a future age, and thus the American belief in the westward march of civilisation will be verified; or we may possibly return to the East, and convert Constantinople or Cairo into the world's emporium and centre of intercourse.

But, whatever may happen in the future, the great changes which have taken place in the relative importance of the peninsulas and islands of Europe in the short span of twenty centuries, sufficiently prove that geographical features exercise a varying influence at different epochs. That which at one time was looked upon as a great natural advantage may become, in course of time, a serious disadvantage. Thus the numerous inlets and gulfs enclosed by mountain chains, which favoured the rise of the cities of Greece, and gave to Athens the dominion of the Mediterranean, now constitute as many obstacles to their connection with the existing system of European communications. That which in former times constituted the strength of the country has become its weakness. In primitive times, before man ventured upon the seas, these bays and gulfs formed insurmountable obstacles to the migration of nations; at a later date, when the art of navigation had been acquired, they became commercial high-roads, and were favourable to the development of civilisation; and at the present time they are again obstacles in the way of our road-builders and railway engineers.

IV.—Climate.

The influence exercised by the relief of the land and the configuration of the coasts varies in different ages, but that of climate is permanent. In this respect Europe is the most favoured region of the earth, for during a cycle of unknown length it has enjoyed a climate at once the most temperate, the most equable, and the most healthy of all continents.

Owing to the inland seas which penetrate far into the land, the whole of Europe is exposed to the modifying influence of the ocean. With the exception of Central Russia, no part of Europe is more than 400 miles from the sea, and, as most of the mountains slope from the centre of the continent towards its circumference, the influence of the sea breezes is felt throughout. And thus continental Europe, in spite of its great extent, enjoys the advantages of an insular climate throughout, the winds passing over the ocean moderating the heat of summer and tempering the cold of winter.

The continuous north-easterly movement of the waters of the Atlantic likewise has a favourable effect upon the climate of Europe. After having been heated by a tropical sun in the Gulf of Mexico, the gulf-stream issues through the Strait of Florida, and, spreading over the Atlantic, takes its course towards the coasts of Europe. This enormous mass of warm water, equal in volume to twenty million rivers as large as the Rhone, brings the warmth of southern latitudes to the western and northern shores of Europe. Its influence is felt not only in the maritime countries of Western Europe, but to some extent as far as the Caspian and the Ural Mountains.

The currents of the air exercise as favourable an influence upon the climate of Europe as do those of the ocean. The south-westerly winds predominating on the coasts pass over the warm gulf-stream, and, on reaching Europe, they part with the heat stored up by them between the tropics. The north-westerly, northerly, and even north-easterly winds, which blow during a portion of the year, are less cold than might be expected, for they, too, have to cross the warm waters of the gulf-stream. And lastly, there is the Sahara, which elevates the temperature of a portion of Europe.

The increase in temperature due to the combined influence of winds and ocean currents amounts to 40°, 50°, and even 60°, if we compare Europe with other parts of the world lying under the same latitudes. Nowhere else, not even on the western coast of North America, do the isothermals, or lines of equal annual temperature, ascend so high towards the arctic regions. The inhabitants of Europe, though they may live 900 to 1,200 miles farther away from the equator, enjoy as mild a climate as do those of America, and the decrease of temperature on going northward is far less rapid than in any other part of the globe. This uniformity of temperature constitutes one of the most characteristic features of Europe. The whole of it lies within the temperate region bounded by the isothermal lines of 32° F. and 68° F., whilst in America and Asia that privileged zone has only half this extent.

This remarkable uniformity in the climate of Europe is exhibited not only in its temperature, but likewise in the distribution of its rains. The seas washing the shores of Europe supply all parts of it with the necessary amount of moisture. There is no rainless district, nor, with the exception of a portion of the maritime region of the Caspian and a small corner of Spain, any district where droughts occasionally entail the entire loss of the harvest. Rains fall not only regularly every year, but in most countries they occur in every season, the only exception being the countries of the Mediterranean, where autumn and winter are the real rainy seasons. Moreover, in spite of the great diversity in the physical features of Europe, the amount of rain is scarcely anywhere excessive, whether it descends as a fine drizzle, as in Ireland, or in heavy showers, as in Provence and on the

Fig. 4.—The Isothermal Zone of Europe.
Scale 1 : 60,000,000.

southern slope of the Alps. The annual rainfall scarcely ever exceeds thirty-nine inches, except on the flanks of certain mountain ranges which arrest the passage of currents charged with moisture. This uniformity and moderation in the rainfall exercise a regulating influence upon the course of the rivers, for even the smallest amongst them, at all events those to the north of the Pyrenees, the Alps, and the Balkan, flow throughout the year. They rise and fall generally within narrow limits, and inundations on a vast scale are as rare as is want of water for purposes of irrigation. In consequence of this regularity, Europe is able to derive a greater advantage from its waters than other continents where the amount of precipitation is more considerable. The Alps contribute much towards main-

taining a regular flow of the rivers: the excess of humidity which falls to their share is stored up in the shape of snow and ice, which descend slowly into the valleys, and melt during the heat of summer. This happens just at a time when the rivers gain least from rain, and lose most by evaporation, and some amongst them would dry up if the ice of the mountains did not come to the aid of the waters descending from the sky. It is thus that a sort of balance is established in the economy of European rivers.

The climate of Europe is thus characterized by uniformity as a whole, and by a compensatory action in its contrasts. Regularity and freedom from excess, such as are not known in other continents, mark its ocean currents, its winds, its temperature and rains, and the course of its rivers. These great advantages have benefited its inhabitants in the past, and will not cease to do so in the future. Though small in extent, Europe possesses by far the largest area of acclimation. Man may migrate from Russia to Spain, or from Ireland to Greece, without exposing himself to any great risk of life. The inhabitants of the Caucasus and the Ural Mountains were thus able to cross the plains and mountains of Europe, and to establish themselves on the shores of the Atlantic. Soil and climate are equally propitious to man, and enable him to preserve his physical and intellectual powers wherever he goes. A migratory people might found new homesteads in any part of Europe. Their companions of travel—the dog, the horse, and the ox—would not desert them on the road, and the seed-corn which they carry with them would yield a harvest wherever confided to the earth.

V.—Inhabitants.

A study of the soil and a patient observation of climatic phenomena enable us to appreciate the general influence exercised by the nature of the country upon the development of its inhabitants; but it is more difficult to assign to each race or nation its due share in the progress of European civilisation. No doubt, in their struggles for existence, different groups of naked and ignorant savages must have been acted upon differently, according to their numbers and physical strength, their inborn intelligence, their tastes and mental tendencies. But who were those primitive men who first turned to account the natural resources of the country in which they dwelt? We know not; for, if we go back for a few thousand years, every fact is shrouded in darkness. We know nothing even as regards the origin of the leading nations of Europe. Are we the "sons of the soil," and the "shoots of oak-trees," as told in the poetical language of ancient tradition, or are we to look upon the inhabitants of Asia as the ancestors to whom we are indebted for our languages, and for the rudiments of our arts and sciences? Or did those immigrants from a neighbouring continent settle down amongst an indigenous population? Not many years ago the Asiatic origin of European nations was accepted as an established fact, and the original seats of our forefathers were pointed out upon the map of Asia. But now most men of science are agreed to

ETHNOGRAPHICAL MAP
OF
EUROPE
By E. G. Ravenstein, F.R.G.S.
BASK
CAUCASIAN
HAMITO-SEMITIC
INDO-GERMANIC
Iranian
Celtic
Italic Latin
Albanian
Greek
Lithuanian
Slav
German
Scandinavian
English
MONGOL
Finn
Samoyed
Tatar (Turk)
Mongol
ICELANDERS
Normans
Irish
Welsh
Gaels
ENGLISH
Dan
Man
Friesians
Holland
Westphal
Flemish
Wallons
Picards
Bretons
Norman
Isle de Fr
Burgunds
Lorraine
Frankfurt
Frankfurt
Saxons
Wends
Silesians
Chechians
Morties
Austrians
Styrians
Slovaks
Slovenes
Rhaetians
Tyrol
Friuli
Italo-Celts
Romans
Dalmatians
Bosnians
Herzegovins
Galegos
BASKS
Gascons
Provencals
Catalanes
Valencians
Andalusians
Morisco
Baleares
Corsicans
Catalanes
Sardinians
Neapolitans
Albans
Sicilians
Maltese
Kabyles
Shauia
Arabs
Shilluk
Amazirgh
BERBERS
Beni Miah
ARABS
MOORS
Tuareg
Long
30
20
10
0
10
20
60°
50°
40°
30

30
40°
50
80
60°
50°
40°
30
S A M O Y E D S
O s t i a k s
V o g u l s
Sib. Tatars
Quaens
Karelians
Esths
Jews
Permyaks
Votiaks
Cheremis
Kazan Tatars
Chuvash
Mordvins
Bashkirs
K I R G H I Z (K A S A K)
Germans
Tatars
White Russians
Great Russians
Little Russians
Calmucks
Kirgiz
Nogai
Greeks
Bulgarians
Nogai
Tatars
Turks
Adighe
Abhas
Kabards
Suani
Osseti
Kisti
Lesghs
Georgians
Tat
ARMENIANS
Turkomen
Kajars
BLACK SEA
Kurds
Arm
T U R K S
Kurds
Zebek
Yuruk
Gr
K U R D S
Nestor
Chaldeans
Yezidi
Shekagi
P E R S I A N S
(TAJIKS)
Lur
Feili
Bakhtyari
Janeki
Kuhgelu
Mamasem
Nazaira
Maronites
Druses
A R A B S
S E A
East of Greenwich 30
40
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& Co LIMITED

seek our ancestors upon the very soil which we, their descendants, still occupy. Caverns, the shores of oceans and lakes, and the alluvial beds of our rivers have yielded the remains of human industry, and even human skeletons, which clearly prove that long before these supposed immigrations from Asia there existed in Europe tribes who had already made some progress in human industry. Even in the childhood of history there existed tribes who were looked upon as aborigines, and some of their descendants—as, for instance, the Basks—have nothing in common with the invaders from the neighbouring continent. Nor is it universally admitted that the Aryans—that is, the ancestors of the Pelasgians, the Greeks, the Latins, Celts, Germans, and Slavs—are of Asiatic origin. Similarity of language may justify our belief in the common origin of the Aryans of Europe, the Persians, and the Hindoos, but it does not prove that their ancestral home should be looked for somewhere near the sources of the Oxus. Many men of learning * look upon the Aryans as aborigines of Europe, but certainty on this point does not exist. No doubt, in prehistoric times, intermigrations between the two continents were frequent; but we hardly know what directions they took, and can speak with certainty only of those migrations of peoples which are related by history. We thus know that Europe sent forth to other continents Galatians, Macedonians, and Greeks, and more recently innumerable emigrants of all nationalities, and received in turn Huns, Avares, Turks, Mongols, Circassians, Jews, Armenians, Moors, Berbers, and members of many other nations.

Leaving out of consideration the smaller families of nations, as well as the members of races who have not attained a national existence, Europe may be described as consisting of three great ethnological divisions, the principal boundary between which is formed by the Alps, the Carpathians, and the Balkan.

The first of these great families of European nations, the members of which speak Greco-Latin languages, occupies the southern slopes of the Balkan and of the Alps, the Iberian peninsula, France, and a portion of Belgium, as well as a few detached territories within the limits of the ancient Roman empire, altogether surrounded by alien nations. Such are the plains of the Lower Danube and a portion of Transylvania, which are inhabited by the Rumanians, and a few secluded Alpine valleys inhabited by "Romans." On the other hand, fragments of two ancient nations have maintained their ground in the midst of Latinised populations, viz. the Celtic inhabitants of Brittany, and the Basks of the Pyrenees. Generally speaking, however, all the inhabitants of South-western Europe, whether of Celtic, Iberian, or Ligurian race, speak languages derived from the Latin, and whatever differences existed originally between these various populations, this community of language has more or less obliterated them.

The Teutonic nations form the second great group. They occupy nearly the whole of Central Europe to the north of the Alps, and extend through Holland and Flanders to within a short distance of the Straits of Dover. Denmark and the great Scandinavian peninsula, as well as Iceland, belong to the same group, and

* Latham, Benfey, Cuno, Spiegel, and others.

the bulk of the inhabitants of the British Islands are likewise generally included in it. The latter, however, should rather be described as a mixed race, for the aboriginal Celtic population of these islands, which now exists pure only in a few remote districts, has amalgamated with Anglo-Saxon and Danish invaders, and the language of the latter has become mixed with mediæval French, the resulting idiom being almost as much Latin as Saxon. The development of national characteristics has been favoured by the isolation in which the inhabitants of the British Islands found themselves, and they differ essentially from continental neighbours—the Scandinavians, Germans, and Celto-Latins—in language and customs.

The Slavs, or Slavonians, form the third group of European nations. They are less numerous than the Greco-Latins, but the territories they occupy are far more extensive, for they spread over nearly the whole of Russia, over Poland, a large portion of the Balkan peninsula, and about one-half of the Austro-Hungarian monarchy. All the great plains to the east of the Carpathians are inhabited by Slavs, either pure or mixed with Tartars and Mongols. To the west and south of the mountains the race is split up into numerous small nations, and in the valley of the Danube these come into contact with Rumanians, as well as with Turks and Magyars, the two latter being of Asiatic origin, and these separate the Slavonians of the north from the Slavonians of the south. In the north, Finns, Livonians, and Lithuanians interpose between the Slavonians and the Germanic nations.*

Race and language, however, are not always identical. Members of one race frequently speak the language of another, and race and linguistic boundaries, therefore, differ frequently. As for the political boundaries, they scarcely ever follow those natural features which would have been selected had their settlement been intrusted to the spontaneous action of the different nations. They hardly ever coincide with the boundaries of races or of languages, except in the case of a few high mountain ranges or of arms of the sea. On many occasions the countries of Europe were arbitrarily split up in consequence of wars or diplomatic arrangements. A few peoples only, protected by the nature of their country as well as

* Population of Europe, about 305,000,000:—

Greco-Latin.		Germanic.		Slavonic.	
Greeks	2,600,000	Germans	53,400,000	Russians	59,000,000
Albanians	1,250,000	Dutch and Flemish	6,720,000	Poles	11,800,000
Italians	27,700,000	Scandinavians	5,640,000	Czechians, &c.	6,750,000
French	39,700,000	Anglo-Saxons	30,600,000	Servians	5,750,000
Spaniards and Portuguese	20,210,000			Slovenes	1,200,000
Rumanians	8,400,000			Bulgarians	3,100,000
Rhætians ("Romans")	42,000				
	99,902,000		96,360,000		87,600,000

Finns	4,700,000	Celts	1,600,000
Osmanli	1,300,000	Basks	700,000
Magyars	5,770,000	Letts, &c.	2,900,000
Tartars	2,500,000	Armenians	280,000
Calmucks	100,000	Gipsies	590,000
		Circassians	400,000

Included above are 4,500,000 Jews.

by their valour, have maintained their independence since the age of great migrations, but many more have been swept away by successive invasions. Many others, again, have alternately seen their frontiers expand and contract more than once even during a generation.

The so-called "balance of European powers," founded as it is upon the rights of war and ambitious rivalries between nations, is necessarily unstable. Nations eminently fit to lead a common political existence are torn asunder on the one side, whilst the most heterogeneous elements are thrown together on the other. In these political arrangements the nations themselves are never consulted, but their wishes and inclinations must nevertheless prevail in the end, and the artificial edifice raised by warriors and statesmen will come to the ground. A true "balance of power" will only be established when every nation of the continent shall have become the arbiter of its own destinies, when every pretended right of conquest shall have been surrendered, and neighbouring nations shall be at liberty to combine for the management of the affairs they have in common. Our arbitrary political divisions, therefore, possess but a transitory value. They cannot altogether be ignored; but in the following descriptions we shall, as far as possible, adhere to the great natural divisions as defined by mountains and valleys, and by the distribution of nations having the same origin and speaking the same language. But even these natural boundaries lose their importance in countries like Switzerland, inhabited by nations speaking different languages, but held together by the strongest of all ties—the common enjoyment of freedom.

From an historical point of view a description of Europe should commence with the maritime countries of the Mediterranean. It was Greece which gave birth to our European civilisation, and which at one time occupied the centre of the known world. Her poets first sang the praises of venturesome navigators, and her historians and philosophers collected and classified the information received with respect to foreign countries. In a subsequent age, Italy, in the very centre of the Mediterranean, took the place of Greece, and for fifteen centuries maintained herself therein: Genoa, Venice, and Florence succeeded Rome as the leaders of the civilised world. During that period the surrounding nations gravitated towards the Mediterranean and Italy; and it was only when the Italians themselves enlarged the terrestrial sphere by the discovery of a new world beyond the ocean that this preponderance passed away from them, to remain for a short time with the Iberian peninsula. Greece had been the mediator between Europe and the ancient civilisations of Asia and Africa; Spain and Portugal became the representatives of Europe in America and the extreme Orient; historical development in its progress had followed the axis of the Mediterranean from east to west.

It will be found natural, under these circumstances, when we describe the three Mediterranean peninsulas in the same volume, particularly as they are peopled almost exclusively by Greco-Latin nations. France, though likewise Latinised, nevertheless occupies a distinct position. It is a Mediterranean country only as respects Provence and Languedoc, the rest of its territory sloping towards the Atlantic. Its geographical position and history have made France the great

European thoroughfare upon which the nations of the Mediterranean and of the Atlantic meet to exchange their products and to fight their battles. Ideas are imported into France from all parts of Europe, and she is called upon to act the part of an interpreter between the nations of the North and of the South. Next to France we shall describe the Germanic countries of Europe, the British Islands, and Scandinavia; and lastly, the immense empire of Russia.

THE MEDITERRANEAN.

I.—Hydrology.

GREECE and its insular satellites prove sufficiently that the unstable floods of the Mediterranean have exercised a greater influence upon the march of history than did the solid land upon which man trod. Western civilisation would never have seen the light had not the waters of the Mediterranean washed the shores of Egypt, Phœnicia, Asia Minor, Hellas, Italy, Spain, and Carthage. The western nations would have remained in their primitive barbarism if it had not been for the Mediterranean, which joined Europe, Asia, and Africa; facilitated the intercourse between Aryans, Semites, and Berbers; and rendered more equable the climate of the surrounding countries, thus facilitating access to them. For ages it appeared almost as if mankind could prosper only in the neighbourhood of this central sea, for beyond its basin only decayed nations were to be met with, or tribes not yet awakened to mental activity. "Like frogs around a swamp, so have we settled down on the shores of this sea," said Plato; and the sea he refers to is the Mediterranean. It is therefore deserving of description quite as much as the inhabited countries which surround it. Unfortunately many mysteries still remain hidden beneath its waves.*

From an examination of the coasts, as well as from the traditions of the people inhabiting them, we learn that the Mediterranean has varied frequently in its contours and extent. The straits which connect its waters with those of the ocean have frequently changed their position. At a time when peninsulas like Greece, and even islands like Malta, formed part of continental masses—and that they did so in a comparatively recent geological epoch is proved by their fossil fauna—the waters of the Mediterranean covered large portions of Africa, of Southern Russia, and even of Asia. The researches of Spratt, Fuchs, and others have satisfactorily proved that towards the close of the miocene age a vast fresh-

* W. H. Smith, "The Mediterranean."—Dureau de la Malle, "Géographie Physique de la Mer Noire et de la Méditerranée."—Böttger, "Das Mittelmeer."

water lake stretched from the banks of the Aral, across Russia, the plains of the Danube and the Archipelago, as far as Syracuse in Sicily. Then came the briny waters of the ocean. There was a time when the Black Sea and the Caspian connected the Archipelago with the Gulf of the Obi. At another epoch the gulfs of the Syrtes penetrated far inland, and a large portion of what is now the Libyan and Saharan desert was then covered with water. The Strait of Gibraltar, which was torn asunder by Hercules according to the traditions of the ancients, is in reality but of recent origin, and has taken the place of a more ancient strait which joined the Mediterranean to the Red Sea and Indian Ocean: this strait has been restored by human hands, and is known now as the Suez Canal. The coast-lines of the Mediterranean are undergoing perpetual change, owing to the upheaval or subsidence of the countries surrounding it. The Nile, the Po, the Rhone, and other rivers incessantly enlarge the alluvial plains at their mouths, and still further encroach upon the sea. Actually the Mediterranean, with its subordinate

Fig. 5.—The Depth of the Mediterranean.
From a Chart by M. Delesse.

seas from the Strait of Gibraltar to the Sea of Azof, covers an area about thirty times that of the British Islands. This area is small if we compare it with the immense development of the coasts and the wealth in peninsulas, which impart an aspect of life and independence to at least one-third of the ancient world. The Mediterranean, though it takes precedence of all the oceans, in consequence of the part it has played in history, nevertheless only covers an area one-seventieth that of the Pacific.* It is broken up, moreover, into several separate seas, some of them so small in extent that the navigator hardly ever loses sight of the land. In the

* Area of the Mediterranean basin:—

Drainage of	Europe	683,500	square miles.
	Asia	232,000	,,
	Africa	1,737,500	,,
	Mediterranean Sea	1,153,300	,,
		3,806,300	

east we have the Black Sea, with its two dependencies, the Seas of Azof and of Marmara. The Ægean Sea, or Archipelago, with its numerous islands, extends between the deeply indented coasts of Greece, Asia Minor, and Crete. The Adriatic stretches towards the north-west, between the Balkan peninsula and Italy; and the Mediterranean proper is divided into two separate basins, which might appropriately be called the Phœnician and Carthaginian Seas, or the Greek and Roman Mediterraneans. Each of these basins is again subdivided, the one by Crete, the other by the two islands of Sardinia and Corsica. These various subdivisions of the Mediterranean differ in area, and still more in depth. The Sea of Azof almost deserves the name of "Swamp," which was bestowed upon it by the ancients, for if a ship sinks in it the masts remain visible above the water. The Black Sea has a maximum depth of over 1,000 fathoms, but the narrow strait which joins it to the Sea of Marmara is shallower than many a European river. The cavity filled by the Sea of Marmara is far inferior to that of many an inland lake; and the Dardanelles, like the Bosphorus, are hardly wider than a river. In the Archipelago and the eastern basin of the Mediterranean proper the depth corresponds with the protuberance of the land. Abyssal depths and "pits" of 260 and even of 540 fathoms are to be found in close proximity to the scarped mountain islands of the Cyclades, whilst on the low coasts of Egypt the water deepens only gradually, until in the centre of the Levantine Sea it attains a depth of 1,750 fathoms. The maximum depth—2,170 fathoms—is attained between Crete and Malta. If the whole of the waters of the Mediterranean were to be collected into an aqueous sphere, the latter would have a diameter of 90 miles; if it fell down upon the earth, it would not even wholly cover a country like Switzerland.

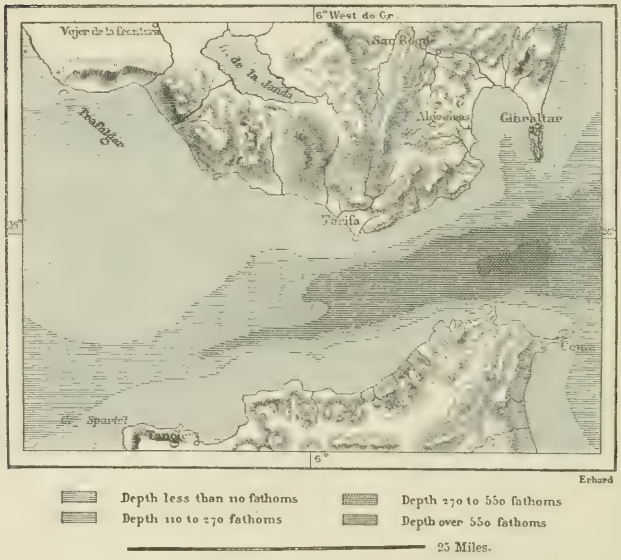
The Ionian Sea is separated from the Adriatic by a submarine ridge rising in the Strait of Otranto, and bounded on the west by a shoal or submarine isthmus, already referred to by Strabo, which joins Sicily to Tunis. This isthmus forms the true geological boundary between the western and eastern basins of the Mediterranean, which are connected here by a narrow breach only, the depth of which hardly exceeds 100 fathoms. The western of these basins is the smaller and shallower of the two, but nevertheless it attains a depth of 1,100 fathoms in the Tyrrhenian, and of 1,360 fathoms and even 1,640 in the Balearic Sea, and is separated from the waters of the Atlantic by a submarine ridge lying outside the Strait of Gibraltar, and joining Europe to Africa.*

This subdivision of the Mediterranean into separate basins, divided from each other by shoals or submarine ridges, by islands and promontories, sufficiently explains the contrasts between the phenomena of the open ocean and those observed here. In the Mediterranean, it is well known, the tides are almost everywhere irregular and uncertain. To the east of the Narrows of Gibraltar, in the sea extending between Andalusia and Morocco, the tides are hardly felt at all, and

	Western basin.	Eastern basin.	Adriatic.	Archipelago.	Black Sea.	Mediterranean.
* Area . . .	355,200	502,000	50,200	60,600	185,300	1,153,300
Greatest depth, fathoms	1,640	2,170	665	540	1,070	2,170
Average depth, ., .	640	960	110	320	320	640

they are, moreover, interfered with to such an extent by currents that it is exceedingly difficult to determine their amplitude, or the establishment of the various ports. Nevertheless the rise and fall of the tidal wave are sufficiently marked to have attracted the attention of Greek and Italian navigators. On the coasts of Catalonia, France, Liguria, Naples, Asia Minor, Syria, and Egypt the oscillation is hardly perceptible, but on those of Eastern Sicily and of the Adriatic the tide sometimes rises three feet, and, if accompanied by storms, may even attain a height of ten feet in certain localities. The Straits of Messina and of Euripo (Eubœa) have their regular tides, and in the Gulf of Gabes the waters rise and fall with the same regularity as in the open ocean. In the Black Sea, however, no tidal movements

Fig. 6.—The Strait of Gibraltar.
According to Robiquet, Randegger, and others. Scale 1 : 750,000.



whatever have been discovered hitherto. It is nevertheless probable that more careful observations will lead to the discovery of a feeble tide, for it is believed that this phenomenon exists even on Lake Michigan, which has only one-fifth the area of the Black Sea.

The Mediterranean differs not only from the open ocean with respect to the feebleness and irregularity of its tides, but it is likewise without a great stream-current keeping in constant circulation the whole body of its waters. The currents which have been observed in various divisions of the Mediterranean can be ascribed only to local causes. An Italian geographer of the last century, Montanari, has

advanced an hypothesis of a great circuit current which entered the Mediterranean through the Strait of Gibraltar, and, after having washed the shores of Africa as far as Egypt, returned to the west along those of Asia and Europe; but careful observers have vainly endeavoured to discover its existence. They have met only with local currents, produced by an indraught of the waters of the Atlantic, by winds, by the floods of rivers, or by an excess of evaporation. One of these currents sets along the coasts of Morocco and Algeria from west to east; another flows along the Italian coast of the Adriatic from north to south; and a third from the mouth of the Rhone in the direction of Cette and Port Vendres. In fact, the configuration of the sea-bottom, and particularly the shoal between Sicily and Tunis, precludes the existence of any but surface currents in the Mediterranean.

Amongst the local currents the existence of which has been most clearly established are those which convey the waters of the Sea of Azof into the Black Sea, and those of the latter into the Archipelago. The Don more than makes up for the loss by evaporation in the Sea of Azof, and its surplus waters find an exit through the Strait of Kerch into the Black Sea. Similarly the waters of the Dniester, the Dnieper, the Rion, and of the rivers of Asia Minor, and, above all, of the Danube, which by itself conveys a larger volume of water into the Black Sea than all the others combined, are discharged through the Bosphorus and the Dardanelles into the Archipelago. On the other hand, the Archipelago returns to the Black Sea, by means of a submarine counter-current and of lateral surface currents, a certain quantity of salt water for the fresh water which it receives in excess. This exchange accounts for the saliness of the waters of the Black Sea. The volume of fresh water discharged into it by the Danube and other rivers is so large that in the course of a thousand years its waters would become perfectly fresh, if there did not exist these compensatory highly saline counter-currents.

Analogous phenomena take place at the other extremity of the Mediterranean. Evaporation there is excessive, owing to the neighbourhood of the burning sands of the deserts, the winds from which blow freely over the sea, absorbing the vapours and dispersing the clouds. The loss by evaporation amounts to at least seven feet in the course of a year, and as the annual rainfall is estimated to amount to twenty inches only, and the volume of water discharged annually by all the tributary rivers of the Mediterranean, if uniformly spread over its surface, would hardly exceed ten inches in depth, there exists thus an excess of evaporation amounting annually to more than four feet; and this excess has to be made good by an inflow of the waters of the Atlantic, which takes place through the Strait of Gibraltar, whose volume far exceeds that of the Amazon in a state of flood. This inflow of the waters of the Atlantic is felt, as a current, as far as the coasts of Sicily, and, like all other currents, it is bounded by lateral currents flowing in a direction contrary to that of the main current. During ebb the insetting Atlantic current takes up the whole of the strait, but when the tide rises the Mediterranean resists more successfully the pressure of the ocean, and this struggle gives birth to

two counter-currents, one of which skirts the coast of Europe, the other that of Africa between Ceuta and Cape Spartel; the latter is the larger and more powerful of the two. In addition to these, there exists a submarine current, which conveys the highly saline and heavier waters of the Mediterranean out into the Atlantic.

The quantity of salt held in solution in various parts of the Mediterranean differs widely, as the submarine ridges and shoals which divide it into separate basins do not permit its waters to mingle as freely as in the open ocean. Owing to the excess of evaporation, the quantity of salt is greater on the whole than in the Atlantic, and this is the case more particularly on the coast of Africa. But in the Black Sea it is far less, and near the mouths of some of the large rivers which enter that sea the water is almost fresh.*

The temperature of the Mediterranean is affected by the same causes which produce its varying salineness, viz. the existence of shoals and banks, which separate it into distinct sub-basins. In the open ocean the currents convey to all latitudes large bodies of water, some of them heated by a tropical sun, others cooled by contact with the ice of the polar regions. But these layers of unequal density are regularly superimposed one upon the other, owing to the differences in their temperature: the warm water remains on the surface, whilst the cold water descends to the bottom. In the Mediterranean an analogous superimposition exists only to a depth of 110 fathoms, which is the depth of the Atlantic current, flowing into it through the Strait of Gibraltar. If a thermometer be lowered to a greater depth it will indicate no further decrease of temperature, and the immense body of water, remaining almost still at the bottom of the Mediterranean, has an equable temperature of about 56° F. Observations made at depths varying between 110 and 1,640 fathoms have always exhibited the same result. Professor Carpenter believes, however, that the abyssal waters of some of the volcanic regions have a somewhat higher temperature, which may be due to the presence of lava in a state of fusion.

II.—Animal Life. Fisheries and Salt Pans.

Another remarkable feature of the abyssal waters of the Mediterranean consists in their poverty of animal life. No doubt there is some life; the dredgings of the *Porcupine* and the telegraph cables, which, on being brought to the surface, were found to be covered with shells and polypes, prove this. But, compared with those of the ocean, the depths of the Mediterranean are veritable deserts. Edward Forbes, who explored the waters of the Archipelago, arrived at the conclusion that their abyssal depths were entirely devoid of life, but he was wrong when he assumed an exceptional case like this to represent a universal law. Carpenter thinks that this absence of life in the depths of the Mediterranean is due to the great quantity of organic remains which is carried into it by the rivers. These remains absorb the oxygen of the water, and part with their carbonic acid, which is detrimental to

* Quantity of salt held in solution in the Atlantic, 36 parts in 1,000; in the Mediterranean (mean), 38 parts; in the Black Sea, 16 parts.

animal life. In numerous instances the water of the Mediterranean contains only one-fourth the normal quantity of the former gas, but fifty per cent. in excess of the latter. To the presence of these organic remains the Mediterranean is probably indebted for its beautiful azure colour, so different from the black waters of most oceans. This blue, then, which is justly celebrated by poets, would thus be caused by the impurity of the water. M. Delesse has shown that the bottom of nearly the whole of the Mediterranean is covered with ooze.

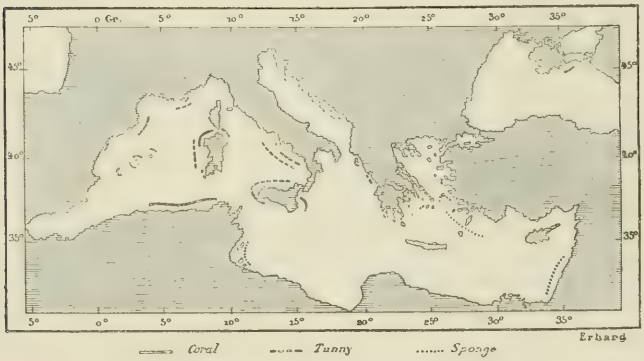
The regions of the Mediterranean immediately below the surface abound in animal life, particularly on the coasts of Sicily and Southern Italy; but nearly all species, whether fish, testacea, or others, are of Atlantic origin. The Mediterranean, in spite of its vast extent, as far as its fauna is concerned, is nothing but a gulf of the Lusitanian Ocean. Its longitudinal extension and the similarity of climate in its various portions have favoured the migration of animals through the Strait of Gibraltar as far as the coasts of Syria. At the same time, animal life is most varied near this point of entry, and the species met with in the western basin are generally of greater size than those which exist in the eastern. A very small proportion of non-Atlantic species recalls the fact that the Mediterranean formerly communicated with the Red Sea and the Indian Ocean. But amongst a total of more than eight hundred molluscs there are only about thirty which have reached the seas of Greece and Sicily through the ancient straits separating Africa from Asia, instead of through the Strait of Gibraltar.* The diminution in the number of species in an easterly direction becomes most striking when we reach the narrow channel of the Dardanelles and the Bosphorus. The Black Sea, in fact, differs essentially from the Mediterranean proper as regards temperature. It is refrigerated by north-easterly winds sweeping over its surface, to the extent even of portions of it becoming now and then covered with a thin coating of ice, adhering to the coast. The Sea of Azof has frequently disappeared beneath a thick crust of ice, and even the whole of the Black Sea has been frozen over in winters of exceptional severity. The cold surface waters, together with those conveyed into the Black Sea by large rivers, descend to the bottom, and prove most detrimental to animal life. Echinodermata and zoophytes are not met with at all in the Black Sea; certain classes of molluscs, already rare in the Levantine Sea and the Archipelago, are likewise absent; and the total number of species of molluscs is only one-tenth of what it is in the Mediterranean. Fish are numerous as far as individuals go, but their species are few. In fact, the fauna of the Black Sea appears to resemble that of the Caspian, from which it is cut off, rather than that of the Greek seas, with which the Sea of Marmara connects it.

In addition to the species which have found a second home in the Mediterranean, there are some that must still be looked upon as visitors. Such are the sharks, which extend their incursions to the seas of Sicily, to the Adriatic, and even to the coasts of Egypt and Syria. Such, also, are the larger cetacea—whales, rorquals, and sperm whales—whose visits, however, are confined now to the Tyrrhenian

* There are found in the Mediterranean 444 species of fish (Goodwin Austen), 850 species of molluscs (Jeffreys), and about 200 species of foraminiferæ.

basin, and become less frequent from century to century. The tunny-fish of the Mediterranean are also visitors from the coasts of Lusitania. First-rate swimmers, they enter through the Strait of Gibraltar in spring, ascend the whole of the Mediterranean, make the tour of the Black Sea, and return in autumn to the Atlantic, after having accomplished a journey of some 5,600 miles. In the opinion of the fishermen the tunnies go upon their travels in three immense divisions or shoals, and it is the central shoal which visits the coasts of the Tyrrhenian Sea, and consists of the largest and strongest fish. Each of the three divisions appears to be composed of individuals about the same age. For mutual protection they swim in troops, for they are preyed upon by enemies innumerable. Dolphins and other fish of prey follow their track, but their great destroyer is man. In the summer the tunny fishery, or *tonnaro*, is carried on in numerous bays of Sicily, Sardinia, Naples, and of Provence. Enormous structures consisting of nets

Fig. 7.—The Principal Fisheries of the Mediterranean.
Scale 1 : 38,300,000.



enclose these bays, and they are ingeniously arranged so as to close gradually around the captured fish, which, passing from net to net, find themselves at last in the "chamber of death," where they are massacred. Millions of pounds of flesh are annually obtained from these floating "slaughter-houses," yet the tunny appears year after year in multitudes, and on the same coasts. There may have been a slight decrease in the number, but their closely packed masses still invade the "Golden Horn" of Byzance and other bays, as they did when first they attracted the attention of Greek naturalists.

Next to the tunny fisheries those of the sardines and anchovies are most important. Sea-urchins and other products of the sea are eaten by the inhabitants of the coasts, particularly in Italy, but there is no part of the Mediterranean where animal life is so abundant and so prodigious in quantity as on the celebrated banks of Newfoundland, or on the coasts of Portugal or of the Canaries.

A large number of fishing-boats are engaged, not in the capture of fish, but in

the collection of articles of dress or of the toilet. The purple-shell fisheries on the coasts of Phœnicia, the Peloponnesus, and Greece are no longer carried on, but hundreds of boats are employed annually during the fine season in fishing for coral or sponges.

Coral is found most abundantly in the western portion of the Mediterranean, and the Italian fishermen do not confine themselves to their own shores—to Sicily, Naples, and Sardinia—but also visit the Strait of Bonifacio, the sea off St. Tropez, the vicinity of Cape Creus in Spain, and the waters of Barbary. Ordinary sponges are collected in the Gulf of Gabes, and at the other extremity of the Mediterranean, on the coasts of Syria and Asia Minor, and in the straits winding between the Cyclades and Sporades. Sponges are usually found at a depth of from 12 to 150 feet, and can be gathered by divers; whilst coral occurs at far greater depths, and has to be wrenched off with an iron instrument, which brings up its fragments, mixed with ooze, seaweeds, and the remains of marine animalculæ. This industry is still in a state of barbarism: those devoted to it are not as yet sufficiently acquainted with the sea and its inhabitants to enable them to carry on the sponge and coral fisheries in a rational manner. Yet this they must aim at: they must learn how to deprive Proteus, the ever-changing deity, of his dominion over the inhabitants of the deep.

Next to the fisheries, the preparation of sea salt constitutes one of the leading industries of the Mediterranean coast-lands. But this industry, too, is frequently carried on in a primitive way, and only in the course of the present century have scientific methods been introduced in connection with it. The Mediterranean is admirably suited for the production of salt, for its waters have a high temperature, they hold a very large quantity of salt in solution, the rise and fall of the tides are inconsiderable, and flat seashores alternate with steep coasts and promontories. The most productive salt marshes of the Mediterranean are probably those on the Lagoon, or Étang de Thau, near Cette, and on the littoral of Hyères; but considerable ones may also be met with on the coasts of Spain, in Italy, in Sardinia, Sicily, Istria, and even on the "limans" of Bessarabia, bordering upon the Black Sea. The annual production of salt is estimated at more than a million tons, and exceeds, therefore, the entire tonnage of the commercial marine of France.* But this quantity, large as it is, is infinitesimal if we compare it with the saline contents of the sea, and science will enable us one day to raise a far more abundant treasure from its sterile depths.†

III.—Commerce and Navigation.

Whatever advantages may be yielded by fisheries and salt-works, they shrink into insignificance if we compare them with the great gain—material, intellectual,

* The production of salt on the coasts of the Mediterranean is thus distributed among its coast-lands:— Spain, 200,000 tons; France, 250,000 tons; Italy, 300,000 tons; Austria, 70,000 tons; Russia, 120,000; other countries, 200,000 tons. Total, 1,140,000 tons, valued at £480,000.

† The annual produce of the fisheries has been estimated at £3,000,000, of the coral fisheries at £640,000, of the sponge fisheries at £40,000. Total, £3,680,000.

and moral—which mankind has derived from the navigation of this inland sea. It has repeatedly been pointed out by historians that the disposition of the coasts, islands, and peninsulas of the Mediterranean of the Phœnicians and Greeks admirably favoured the first essays in maritime commerce. Many causes have contributed to make this sea the cradle of European commerce: the faint summits of distant lands visible even before the port has been quitted; numerous nooks along the coasts where a safe refuge may be found in case of storms; regular land and sea breezes; an equability of climate which makes the sailor feel at home wherever business takes him; and, moreover, a great variety of productions resulting from the diverse configuration of the Mediterranean coast-lands. And this commerce, does it not lead to a peaceful intercourse between peoples on neutral ground, and to mutual enlightenment, brought about by an interchange of ideas? Every coast-line which facilitates the intercourse between nations is, therefore, of immense value as a means of developing civilisation.

Civilisation for many centuries marched from the south-east towards the north-west, and Phœnicia, Greece, Italy, and France have successively become great centres of human intelligence. This historical phenomenon is due to the configuration of the sea, which has been the vehicle of migratory nations. In fact, the axis of civilisation, if this expression be allowed, has become confounded with that axis of the Mediterranean which extends from the coast of Syria to the Gulf of Lions, on the coast of France. But the Mediterranean has ceased to be the only centre of gravitation of Europe, which sends its merchantmen now to the two Americas and the farthest East; and civilisation no longer marches in that general line from east to west, but rather radiates in all directions. Civilising streams depart from England and Germany towards Northern America, and from the Latinised countries of Europe towards Southern America. Their direction is still westerly, but they have been deflected towards the south, to meet the conditions imposed by climate and the geographical configuration of land and sea.

It is interesting to trace the changes which have occurred in the historical importance of the Mediterranean. As long as that sea remained the great highway between nations, the commercial republics were content to extend this highway towards the east, by establishing caravan routes to the Gulf of Persia, to India, and to China. In the Middle Ages Genoese factories dotted the coasts of the Black Sea, and extended thence through Trans-Caucasia as far as the Caspian. European travellers, and particularly Italians, at that time crossed Western Asia in all directions; and many a route hardly known in our days was then frequented almost daily. But for several centuries direct commercial intercourse with Central Asia has dwindled down to small proportions.

The Mediterranean had ceased to be a great ocean highway. Our navigators, no longer dreading a boundless sea, took their ships into every part of the ocean. The difficult and perilous land routes were abandoned, the once busy markets of Central Asia became solitudes, and the Mediterranean itself a veritable blind alley, as far as the world's commerce was concerned. This condition of affairs lasted for many years, but since the middle of this century our relations with the East have

been renewed, and the lost ground is rapidly being recovered. Within the last year a great commercial revolution has been effected through the opening of one of the ancient gates of the Mediterranean, and the Suez Canal has become the great highway of steamers between Western Europe, the Indies, and Australia. Possibly, at no distant future, a similar canal will enable our merchantmen to proceed from the Black Sea to the Caspian, and perhaps even to the Amu and the Syr, in the very heart of the ancient continent.

It is thus that the great centres of intercommunication, or vital points of our planet, as we should like to call them, become shifted in the course of time. Port Said, an improvised town on a desert shore, has thus become a centre of attraction for travellers and merchandise, whilst the neighbouring cities of Tyre and Sidon have dwindled down into miserable villages, with nothing to indicate the proud position they held in the past. Carthage, too, has perished, and Venice decayed. Many a thriving place on the shores of the Mediterranean has been reduced to insignificance through the silting up of its harbour, the employment of larger vessels, the loss of independence, or through political changes of all kinds. But in nearly every instance some neighbouring town has taken the place of these decayed harbours, and most of the great routes of commerce have maintained their original directions, and their terminal points, as well as intermediate stations, have remained in the same localities.

There are, moreover, certain places which ships are almost obliged to frequent, and where towns of importance arise as a matter of course. Such are the Straits of Gibraltar and of Messina; such, also, are places like Genoa, Trieste, and Saloniki, which occupy the bottom of gulfs or bays penetrating far into the land. Ports offering the greatest facilities for embarking merchandise intended for foreign countries, such as Marseilles and Alexandria, are likewise natural centres of attraction to merchants. One town there is in the Mediterranean which enjoys at one and the same time every one of the geographical advantages which we have pointed out, for it is situated on a strait connecting two seas and separating two continents. This town is Constantinople, and despite the deplorable maladministration under which it suffers, its position alone has enabled it to maintain its place amongst the great cities of the world.

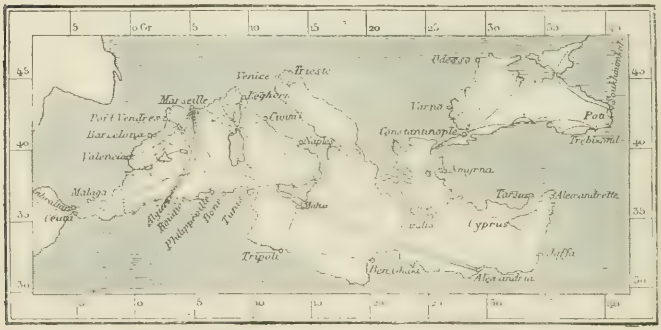
The ports of the Mediterranean no longer enjoy a monopoly of commerce as they did for thousands of years, but the number of ships to be met with in that inland sea is, nevertheless, proportionately far greater than what we meet with on the open oceans. The commercial marine of the Mediterranean numbers thirty-seven thousand vessels, of a capacity of two million seven hundred and ninety-six thousand tons, without counting fishing-boats. This is more than one-fourth of the entire commercial marine of the world, as respects the number of ships, and one-sixth of it as regards tonnage. This inferiority of tonnage is due to the small vessels of ancient types which still maintain their ground in Greece and Italy, and which possess certain advantages for the coasting trade.

To this marine of the Mediterranean should be added the vessels belonging to foreign ports, which visit it for purposes of trade, and amongst which those of

England take the most prominent rank. The Government of Great Britain has even taken care to secure itself a place amongst the Mediterranean powers. It has occupied Gibraltar, at the western entrance to this basin, and taken possession of Malta, which commands its centre; and although the eastern entrance, formed by the Suez Canal, is not in its possession, its garrisons on Perim and the rock of Aden are able at any moment to close up the only approach to it which leads from the Indian Ocean through the Red Sea.

The share which England takes in the commerce of the Mediterranean is considerable, but it is surpassed by far by that of France and Italy. A sovereign who aspired to the dominion of the world once spoke of the inland sea extending from the Strait of Gibraltar to Egypt as a "French lake;" but with equal justice might it be called a Greek, a Dalmatian, or Spanish lake, and with still greater an Italian lake. The pirates of Barbary were, in reality, the last "masters" of the Mediterranean: their swift vessels presented themselves unexpectedly before the

Fig. 8.—Steamer Routes and Telegraphs in the Mediterranean.
Scale 1 : 45,000,000.



coast towns, and carried off their inhabitants. But since their predatory fleets have been destroyed, the Mediterranean has become the common property of the world, and the meshes of an international network of maritime highways become closer from year to year. The merchantmen no longer pursue their voyages in company as they did in former times, discharging their cargo from port to port, for a single vessel may venture now into any portion of the Mediterranean in safety. Still there remain the dangers of reefs and of storms. The art of navigation has made vast progress; most of the capes, at least on the coasts of Europe, are lit up by lighthouses; the approaches to the ports are rendered easy by lightships, buoys, and beacons; but shipwrecks are nevertheless of frequent occurrence. Even large vessels founder sometimes, without leaving a stray plank behind to indicate the place of their disappearance.

Steamers travelling along prescribed routes are now gradually taking the place of sailing vessels, and where they cross at frequent intervals they may be

likened to ferry-boats crossing a river. The regularity and speed of these steam ferries; the facilities which they afford for the conveyance of merchandise; the increasing number of railways which convey the produce of the interior to the seaports; and lastly, the submarine telegraphs, which have established instantaneous means of communication between the principal ports, all contribute towards the growth of Mediterranean commerce. This commerce, including imports and exports, and the transit through the Suez Canal, actually amounts to about £353,000,000, a year.* This may not be much for a maritime population of a hundred millions, but a perceptible increase is taking place from year to year. We should also bear in mind that, face to face with the busy peninsulas of Europe, there lies torrid Africa, an inert mass, avoided by the sailors of our own age as much as it was by those of ancient Greece. Its coasts are hardly ever visited, with the exception of those portions which extend from Oran to Tunis, and from Alexandria to Port Said. It is matter of surprise, too, that certain localities which formerly attracted crowds of vessels, such as Cyrenaica, Cyprus, and beautiful Crete, at the very entrance to the Archipelago, should still remain outside the ordinary track of our steamers.

* Shipping and commerce of the Mediterranean (estimated):—

	Commercial Marine.			Entered and Cleared.	Value of Exports and Imports.
	Sail-vessels.	Steamers.	Tonnage.	Tons.	£
Spain (Mediterranean)	2,500	100	250,000	5,000,000	24,000,000
France ,,	4,000	230	300,000	6,000,000	80,000,000
Italy	18,800	140	1,030,000	21,000,000	104,000,000
Austria	3,000	92	380,000	8,000,000	18,000,000
Greece	5,400	20	502,000	8,500,000	8,000,000
Turkey in Europe and Asia	2,200	10	210,000	25,000,000	24,000,000
Roumania	—	—	—	1,300,000	8,000,000
Russia (Mediterranean)	500	50	50,000	2,000,000	24,000,000
Egypt ,,	100	25	15,000	4,000,000	20,000,000
Malta and Gibraltar	200	13	39,000	12,000,000	23,000,000
Algeria	170	—	10,000	2,000,000	16,000,000
Tunis, Tripoli, &c.	500	—	10,000	500,000	4,000,000
	37,370	680	2,796,000	95,300,000	353,000,000

GREECE.

I.—General Aspects.

GREECE, within its confined political boundaries, to the south of the Gulfs of Arta and Volo, is a country of about nineteen thousand square miles, or at most equal to the ten-thousandth part of the earth's surface. Within the vast empire of Russia there are many districts more extensive than the whole of Greece, but there is nothing which distinguishes these from other districts which surround them, and their names call forth no idea in our mind. The little country of the Hellenes, however, so insignificant upon our maps—how many memories does it not awaken! In no other part of the world had man attained a degree of civilisation equally harmonious in all respects, or more favourable to individual development. Even now, though carried along within an historical cycle far more vast than that of the Greeks, we should do well to look back frequently in order to contemplate those small nations, who are still our masters in the arts, and first initiated us into science. The city which was the "school of Greece" still remains the school of the entire world; and after twenty centuries of decay, like some of those extinct stars whose luminous rays yet reach the earth, still continues to enlighten us.

The considerable part played by the people of Greece during many ages must undoubtedly be ascribed to the geographical position of their country. Other tribes having the same origin, but inhabiting countries less happily situated—such, for instance, as the Pelasgians of Illyria, who are believed to be the ancestors of the Albanians—have never risen above a state of barbarism, whilst the Hellenes placed themselves at the head of civilised nations, and opened fresh paths to their enterprise. If Greece had remained for ever what it was during the tertiary geological epoch—a vast plain attached to the deserts of Libya, and run over by lions and the rhinoceros—would it have become the native country of a Phidias, an Æschylos, or a Demosthenes? Certainly not. It would have shared the fate of Africa, and, far from taking the initiative in civilisation, would have waited for an impulse to be given to it from beyond.

Greece, a sub-peninsula of the peninsula of the Balkans, was even more completely protected by transverse mountain barriers in the north than was Thracia or Macedonia. Greek culture was thus able to develop itself without fear of being stifled at its birth by successive invasions of barbarians. Mounts Olympus, Pelion, and Ossa, towards the north and east of Thessaly, constituted the first line of formidable obstacles towards Macedonia. A second barrier, the steep range of the Othrys, runs along what is the present political boundary of Greece. To the south of the Gulf of Lamia a fresh obstacle awaits us, for the range of the Œta closes the passage, and there is but the narrow pass of the Thermopylæ between it and the sea. Having crossed the mountains of the Locri and descended into the basin of Thebæ, there still remain to be crossed the Parnes or the spurs of the Cithæron before we reach the plains of Attica. The "isthmus" beyond these is again defended by transverse barriers, outlying ramparts, as it were, of the mountain citadel of the Peloponnesus, that acropolis of all Greece. Hellas has frequently been compared to a series of chambers, the doors of which were strongly bolted: it was difficult to get in, but more difficult to get out again, owing to their stout defenders. Michelet likens Greece to a trap having three compartments. You entered, and found yourself taken first in Macedonia, then in Thessaly, then between the Thermopylæ and the isthmus. But the difficulties increase beyond the isthmus, and Lacedæmonia remained impregnable for a long time.

At an epoch when the navigation even of a land-locked sea like the Ægean was attended with danger, Greece found herself sufficiently protected against the invasions of oriental nations; but, at the same time, no other country held out such inducements to the pacific expeditions of merchants. Gulfs and harbours facilitated access to her Ægean coasts, and the numerous outlying islands were available as stations or as places of refuge. Greece, therefore, was favourably placed for entering into commercial intercourse with the more highly civilised peoples who dwelt on the opposite coasts of Asia Minor. The colonists and voyagers of Eastern Ionia not only supplied their Achæan and Pelasgian kinsmen with foreign commodities and merchandise, but they also imparted to them the myths, the poetry, the sciences, and the arts of their native country. Indeed, the geographical configuration of Greece points towards the east, whence she has received her first enlightenment. Her peninsulas and outlying islands extend in that direction; the harbours on her eastern coasts are most commodious, and afford the best shelter; and the mountain-surrounded plains there offer the best sites for populous cities. Greece, at the same time, does not share the disadvantage of Turkey, which is almost cut off from the western world by a mountain region difficult to cross. The Ionian Sea, to the west of the Peloponnesus, it is true, is, comparatively speaking, a desert; but farther north the Gulf of Corinth almost cuts in two the Greek peninsula, and the sight of the distant mountains of Italy, which are visible from the Ionian Islands, must have incited to an exploration of the western seas. The Acarnanians, who knew how to build vaults long before the Romans, were thus brought early into contact with the Italians, to whom they imparted their

knowledge, and at a subsequent period the Greeks became the civilisers of the whole western world of the Mediterranean.

The most distinctive feature of Hellas, as far as concerns the relief of the ground, consists in the large number of small basins, separated one from the other by rocks or mountain ramparts. The features of the ground thus favoured the division of the Greek people into a multitude of independent republics. Every town had its river, its amphitheatre of hills or mountains, its acropolis, its fields, pastures, and forests, and nearly all of them had, likewise, access to the sea. All the elements required by a free community were thus to be found within each of these small districts, and the neighbourhood of other towns, equally favoured, kept alive perpetual emulation, too frequently degenerating into strife and battle. The islands of the Ægean Sea, likewise, had constituted themselves into miniature republics. Local institutions thus developed themselves freely, and even the smallest island of the Archipelago has its great representatives in history.

But whilst there thus exists the greatest diversity, owing to the configuration of the ground and the multitude of islands, the sea acts as a binding element, washes every coast, and penetrates far inland. These gulfs and numerous harbours have made the maritime inhabitants of Greece a nation of sailors—amphibiæ, as Strabo called them. From the most remote times the passion for travel has always been strong amongst them. When the inhabitants of a town grew too numerous to support themselves upon the produce of their land, they swarmed out like bees, explored the coasts of the Mediterranean, and, when they had found a site which recalled their native home, they built themselves a new city. It was thus Greek cities arose in hundreds of places, from the Mæotis Palus to beyond the columns of Hercules—from Tanais and Panticapæum to Gades and Tingis, the modern Tangier. Thanks to those numerous colonies, some of them more powerful and renowned than the mother towns which gave birth to them, the veritable Greece, the Greece of science and art and republican independence, in the end overflowed its ancient cradle, and sporadically occupied the whole circumference of the Mediterranean. The Greeks held the same position relatively to the world of the ancients which is occupied at the present time by the Anglo-Saxons with reference to the entire earth. There exists, indeed, a remarkable analogy between Greece, with its archipelago, and the British Islands, at the other extremity of the continent. Similar geographical advantages have brought about similar results, as far as commerce is concerned, and between the Ægean and the British seas time and space have effected a sort of harmony.

The admiration with which travellers behold Greece is due, above all, to the memories attaching to every one of its ruins, to the smallest amongst its rivulets, and the most insignificant rock in its seas. Scenery in Provence or Spain, though it may surpass in grace or boldness of outline anything to be seen in Greece, is appreciated only by a few. The mass go past it without emotion, for names like Marathon, Leuctra, or Platææ are not connected with it, and the rustle of bygone ages is not heard. But even if glorious memories were not associated with the

coasts of Greece, their beauty would nevertheless entitle them to our admiration. In the gulf of Athens or of Argos the artist is charmed not only with the azure blue of the waters, the transparency of the sky, the ever-changing perspective along the shores, and the boldness of the promontories, but also with the pure and graceful profile of the mountains, which consist of layers of limestone or of marble. We almost fancy we look upon architectural piles; and the temples with which many a summit is adorned appear to epitomize them.

It is verdure and the sparkling water of rivulets which we miss most on the shores of Greece. Nearly all the mountains near the coast have been despoiled of their large trees. There remain only bushes, mastic, strawberry, and juniper trees, and evergreen oaks; even the carpet of odoriferous herbs which clothes the declivities, and upon which the goat browses, has in many instances been reduced to a few miserable patches. Torrents of rain have carried away the mould, and the naked rock appears on the surface. From a distance we only see greyish declivities, dotted here and there with a few wretched shrubs. Even in the days of Strabo most mountains along the coasts had been robbed of their forests, and one of our modern authors says that "Greece is a skeleton only of what it used to be!" By a sort of irony, geographical names derived from trees abound throughout Hellas and Turkey: Caryæ is the "town of walnut-trees," Valanidia that of the Valonia oaks, Kyparissi that of cypresses, Platanos or Plataniki that of plane-trees. Everywhere we meet with localities whose appellation is justified by nothing. Forests at the present day are confined almost entirely to the interior and to the Ionian coast. The Œta Mountains, some of the mountains of Ætolia, the hills of Acarnania, and Arcadia, Elis, Triphylia, and the slopes of the Taygetus, in the Peloponnesus, still retain their forests. And it is only in these forest districts, visited solely by herdsmen, that savage animals, such as the wolf, the fox, and the jackal, are now met with. The chamois, it is said, still haunts the recesses of the Pindus and Œta Mountains; but the wild boar of the Erymanthus, which must have been a distinct species if we are to judge by antique sculptures, exists no more in Greece, and the lion, still mentioned by Aristotle, has not been seen for two thousand years. Amongst the smaller animals there is a turtle, common in some parts of the Peloponnesus, which the natives look upon with the same aversion as do many western nations upon the toad and the salamander.

Greece is a small country, but the variety of its climate is nevertheless great. Striking differences in the climate of different localities are produced by the contrasts between mountains and plains, woodlands and sterile valleys, coasts having a northern or southern aspect. But even leaving out of sight these local differences, it may safely be asserted that the varieties of climate which we meet with in traversing Greece from north to south are scarcely exceeded in any other region. The mountains of Ætolia, in the north, whose slopes are covered with beech-trees, remind us of the temperate zone of Europe, whilst the peninsulas and islands towards the east and south, with their thickets of fig and olive trees, their plantations of oranges and lemons, their aloe hedges and rare palm-trees, belong to the sub-tropical zone. But even neighbouring districts occasionally

differ strikingly as regards climate. In the ancient lake basin of Bœotia the winters are cold, the summers scorching, whilst the temperature of the eastern shore of Eubœa is equable, owing to the moderating influence of sea breezes. Within a narrow compass Greece presents us with the climates of a large portion of the earth, and there can be no doubt that this diversity of climate, and the contrasts of every kind springing from it, must have favourably influenced the intellectual development of the Hellenes. A spirit of inquiry was called forth amongst them which reacted upon their commercial tastes and industrial proclivities.

The diversity of the climate of the land, however, is compensated for, in Greece, by a uniformity in the climate of the maritime districts. As in a mountain valley, the winds of the Ægean Sea blow alternately in contrary directions. During nearly the whole of summer the atmospheric currents of Eastern Europe are attracted towards the African deserts. The winds from the north of the Archipelago and Macedonia then speed the navigator on his voyage to the south, and on many occasions the conquering tribes of the northern shores of that sea have availed themselves of them in their improvised attacks upon the inhabitants of the more southern districts of Asia Minor and of Greece. These regular northerly currents, known as etesian or annual winds, cease on the termination of the hot season, when the sun stands above the southern tropic. They are, moreover, interrupted every night, when the cool sea air is attracted by the heated surface of the land. When the sun has set the wind gradually subsides; there is a calm, lasting a few moments; and then the air begins to move in an inverse direction—"the land begins to blow," as the sailors say. Nor is this regular wind without its counter-current, known as the *embates*, or propitious south-easterly breeze of which the poets sing. General winds and breezes, moreover, are deflected from their original directions in consequence of the configuration of the coast and the direction of mountain chains. The Gulf of Corinth, for instance, is shut in by high mountains on the north and the south, and the winds alternately enter it from the east or west—a phenomenon likened by Strabo to the breathing of an animal.

The rains, like the winds, deviate in many places from the average, and whilst the water pours down into some mountain valleys as into a funnel, elsewhere the clouds drift past without parting with a drop of their humid burden. Contrasts in the amount of precipitation are thus added to those resulting from differences of configuration and variety of climate. As a rule, rain is more abundant on the western shores of Greece than on the eastern, and this fact accounts for the smiling aspect of the hills of Elis, as compared with the barren declivities of Argolis and Attica. Thunder-storms, driven before the winds of the Mediterranean, likewise recur with greater regularity in the western portion of the peninsula. In Elis and Acarnania the roll of thunder may be heard in spring daily, for whole weeks, in the afternoon. No sites more apposite could have been found for temples dedicated to Jupiter, the god of lightning.

The ancient inhabitants of the Cyclades, and probably, also, those of the coasts

of Hellas and Asia Minor, had already attained a considerable amount of culture long before the commencement of our historical records. This has been proved by excavations made in the volcanic ashes of Santorin and Therasia. At the time their houses were buried beneath the ashes, the Santoriniotes had begun to pass from the age of stone into that of copper. They knew how to build arches of stone and mortar, they manufactured lime, used weights made of blocks of lava, wove cloth, made pottery, dyed their stuffs, and ornamented their houses with frescoes; they cultivated barley, peas, and lentils, and had begun to trade with distant countries.

We do not know whether these men were of the same race as the Hellenes; but thus much is certain—that at the earliest dawn of history the islands and coasts of the Ægean Sea were peopled by various families of Greeks, whilst the interior of the country and the western shores of the peninsula were inhabited by Pelasgians. These Pelasgians, moreover, were of the same stock as the Greeks, and they spoke a language derived from the same source as the dialects of the Hellenes. Both were Aryans, and, unless natives of the soil, they must have immigrated into Greece from Asia Minor by crossing the Hellespont, or by way of the islands of the Archipelago. The Pelasgians, according to tradition, sprang from Mount Lycæus, in the centre of the Peloponnesus; they boasted of being "autochthons," "men of the black soil," "children of oaks," or "men born before the moon." All around them lived tribes of kindred origin, such as the Æolians and the Leleges, and these were afterwards joined by Ionians and Achæans. The Ionians, who, in a subsequent age, exercised so great an influence over the destinies of the world, only occupied the peninsula of Attica and the neighbouring Eubœa. The Achæans for a long time enjoyed a preponderance, and in the end the Greek clans collectively became known by that name. Later on, when the Dorians had crossed the Gulf of Corinth where it is narrowest, and established themselves as conquerors in the Peloponnesus, the Amphictyons, or national councils, sitting alternately at Thermopylæ and Delphi, conferred the name of Hellenes, which was that of a small tribe in Thessaly and Phthiotis, upon all the inhabitants of the peninsula and the islands. The name of Greek, which signifies, perhaps, "mountaineer," "ancient," or "son of the soil," gradually spread amongst the nation, and in the end became general. The Ionians of Asia Minor, and the Carians of the Sporades, emulated the Phœnicians by trading from port to port amongst these half-savage tribes, and, like bees which convey the fecundating pollen from flower to flower, they carried the civilisation of Egypt and the East from tribe to tribe.

Phœnician merchants and Roman conquerors scarcely modified the elements composing the population of Hellas, but during the age of migrations barbarians in large numbers penetrated into Greece. For more than two centuries did the Avares maintain themselves in the Peloponnesus. Then came the Slavs, aided, on more than one occasion, by the plague in depopulating the country. Greece became a Slavonia, and a Slavonian language, probably Servian, was universally spoken, as is proved by the majority of geographical names. The superstitions and legends

of the modern Greeks, as has been remarked by many authors, are not simply a heritage derived from the ancient Hellenes, but have become enriched by phantoms

Fig. 9.—Mainote and Spartan.

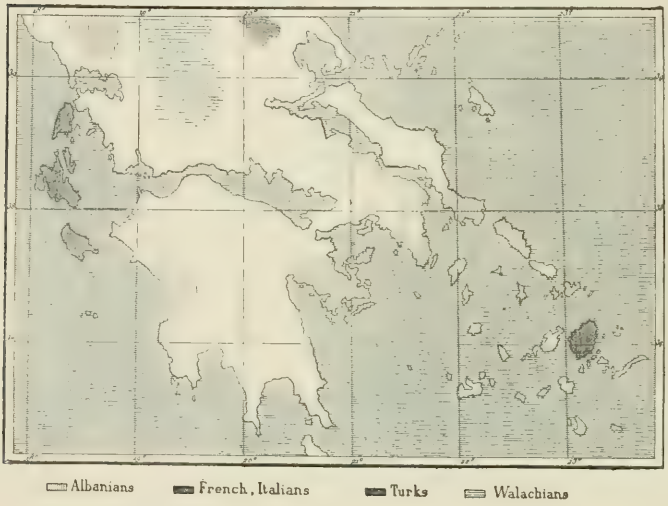
and vampires of Slav invention. The dress of the Greeks, too, is a legacy of their northern conquerors. But, in spite of this, the polished language of the Hellenes

has regained by degrees its ancient preponderance, and the race has so thoroughly amalgamated these foreign immigrants, that it is impossible now to trace any Servian elements in the population. But hardly had Hellas escaped the danger of becoming Slav when it was threatened with becoming Albanian. This occurred during the dominion of Venice. As recently as the commencement of the present century Albanian was the dominant language of Elis, Argos, Bœotia, and Attica, and even at the present day a hundred thousand supposed Hellenes still speak it. The actual population of Greece is, therefore, a very mixed one, but it is difficult to say in what proportions these Hellenic, Slav, and Albanian elements have combined. The Mainotes, or Maniotes, of the peninsula terminating in Cape Matapan, are generally supposed to be the Greeks of the purest blood. They themselves claim to be the descendants of the ancient Spartans, and amongst their strongholds they still point out one which belonged to "Signor Lycurgus." Their Councils of Elders have preserved from immemorial times, and down to the war of independence, the title of Senate of Lacedæmonia. Every Mainote professes to love unto death "Liberty, the highest of all goods, inherited from our Spartan ancestors." Nevertheless, a good many localities in Maina bear names derived from the Servian, and these prove, at all events, that the Slavs resided in the country for a considerable time. The Mainotes practise the *vendetta*, as if they were Montenegrins. But is not this a common custom amongst all uncivilised nations?

However this may be, in spite of invasions and intermixture with other races, the Greeks of to-day agree in most points with the Greeks of the past. Above all things, they have preserved their language, and it is truly matter for surprise that the vulgar Greek, though derived from a rural dialect, should differ so slightly only from the literary language. The differences, analogous to what may be observed with respect to the languages derived from the Latin, are restricted almost to two points, viz. the contraction of non-accentuated syllables and the use of auxiliary verbs. It was, therefore, easy for the modern Greeks to purify their language from barbarisms and foreign terms, and to restore it gradually to what it was in the time of Thucydides. Nor has the race changed much in its physical features, for in most districts of modern Greece the ancient types may yet be recognised. The Bœotian is still distinguished by that heavy gait which made him an object of ridicule amongst the other Greeks: the Athenian youth possesses the suppleness, grace of movement and bearing which we admire so much in the horsemen sculptured on the friezes of the Parthenon; the Spartan women have preserved that haughty and vigorous beauty which constituted the charm of the virgins of Doris. As regards morals, the descent of the modern Hellenes is equally evident. Like their ancestors, they are fond of change, and inquisitive; as the descendants of free citizens, they have preserved a feeling of equality; and, still infatuated with dialectics, they hold forth at all times as if they were in the ancient market-place, or Agora. They frequently stoop to flattery: like the ancient Greeks, too, they are apt to rate intellectual merit above purity of morals.

Like sage Ulysses of the Homeric poem, they well know how to lie and cheat with grace; and the truthful Acarnanian and the Mainote, who are "slow to promise, but sure to keep," are looked upon as rural oddities. Another trait in the character of the modern and ancient Greeks, and one which distinguishes them from all other Europeans, is this—that they do not allow themselves to be carried away by passion, except in the cause of patriotism. The Greek is a stranger to melancholy: he loves life, and is determined to enjoy it. In battle he may throw it away, but suicide is a species of death unknown amongst the modern Greeks, and the more unhappy they are, the more they cling to existence. They are very seldom afflicted with insanity.

Fig. 10.—Foreign Elements in the Population of Greece.



In spite of the diverse elements which compose it, the Greek nationality is one of the most homogeneous in Europe. The Albanians, of Pelasgian descent like the Greeks, do not cede to the latter in patriotism; and it was they—the Suliotes, Hydriotes, Spezziotes—who fought most valiantly for national independence. The eight hundred families of Rumanian or Kutzo-Wallachian Zinzares who pasture their herds in the hills of Acarnania and Ætolia, and are known as Kara-Gunis, or "black cloaks," speak the two languages, and sometimes marry Greek girls, though they never give their own daughters in marriage to the Greeks. Haughty and free, they are not sufficiently numerous to be of any great importance. To foreigners the Greeks are rather intolerant, and they take no pains to render their stay amongst them agreeable. The Turks—who were numerous formerly in certain parts of the Peloponnesus, in Bœotia, and in the

island of Eubœa, and whose presence recalled an unhappy period of servitude—have fled to a man, and only the fez, the narghile, and the slippers remind us of their former presence. The Jews, though met with in every town of the East, whether Slav or Mussulman, dare hardly enter the presence of the Greeks, who are, moreover, their most redoubtable rivals in matters of finance: they are to be found only in the Ionian Islands, where they managed to get a footing during the British Protectorate. In this same Archipelago we likewise meet with the descendants of the ancient Venetian colonists, and with emigrants from all parts of Italy. French and Italian families still form a distinct element of the population of Naxos, Santorin, and Syra. As to the Maltese porters and gardeners at Athens and Corfu, they continue for the most part in subordinate positions, and never associate with the Greeks.

The homogeneous character of the population of Greece does not admit of that country being divided into ethnological provinces, like Turkey or Austro-Hungary, but it consists geographically of four distinct portions. These are (1), continental Hellas, known since the Turkish invasion as Rumelia in remembrance of the "Roman" empire of Byzantium; (2), the ancient Peloponnesus, now called the Morea, perhaps a transposition of the word "Romea," or from a Slav word signifying "sea coast," and applied formerly to Elis; (3), the islands of the Ægean Sea; (4), the Ionian Islands. In describing the various portions of Greece we shall make use, in preference, of the ancient names of mountains, rivers, and towns; for the Hellenes of our own day, proud of the glories of the past, are endeavouring gradually to get rid of names of Slav or Italian origin, which still figure upon the maps of their country.*

II.—Continental Greece.

The Pindus, which forms the central chain of Southern Turkey, passes over into Greece, and imparts to it an analogous orographical character. On both sides of this conventional boundary we meet with the same rocks, the same vegetation, the same landscape features, and the same races of people. By dividing Epirus and handing over Thessaly to the Turks, European diplomacy has paid no attention to natural features. The eastern portion of the boundary is made to follow the line of water parting over the range of the lofty Othrys, commanding the plain of the Sperchius. Westward of the Pindus the boundary

* Greece within its political limits:—

	Area. Sq. m.	Population (1880).	Density.
Continental Greece	7,558	466,918	62
Peloponnesus	8,288	545,389	66
Ægean Islands	2,500	205,840	82
Ionian Islands	1,007	218,879	217
Army, navy, and sailors	—	20,868	—
Total	19,353	1,457,894	75

crosses transversely the valley of the Achelous, and the hills which separate it from the Gulf of Arta.

The isolated summit of Mount Tymphrestus, or Velukhi, which rises where the grand chain of the Othrys branches off from the Pindus, is not the culminating point of continental Greece, but it is a centre from which the principal mountain spurs and rivers radiate. Within its spurs lies hidden the charming valley of Karpenisi, and an elevated ridge joins them, towards the south-east, to the most important mountain mass of modern Greece, viz. the group surmounted by the snow-clad pyramids of the Vardusia and Khiona, whose slopes are covered with dark firs, and to the superb Katavothra, the Œta of the ancients, on which Hercules built his funeral pile. The mountains of Vardusia

Fig. 11.—Mount Parnassus and Delphi.

and Khiona are face to face with the fine mountain masses of Northern Morea, likewise wooded and covered with snow during the greater part of the year.

The mountains of Ætolia, to the west of the Velukhi and the Vardusia, are far less elevated, but they are rugged, and form a veritable chaos of rocks, savage defiles, and thickets, into which only Wallachian herdsmen venture. In Southern Ætolia, on the shores of the lakes and along the rivers, the country is more accessible, but mountains rise there likewise, and by tortuous ridges they are brought into connection with the system of the Pindus. Those on the coast of Acarnania, opposite to the Ionian Islands, are steep, covered with trees and shrubs; they are the mountains of the "Black Continent" mentioned by Ulysses.

To the east of the Achelous there is another coast chain, well known to mariners: this is the Zygos, the southern slopes of which, arid and austere, are seen from off Missolonghi. Still further to the east another range comes down to the seashore, and, together with the promontories on the opposite coast of the Morea, forms the narrow entrance to the Gulf of Corinth. Close to this entrance, on the Ætolian side, there rises bold Mount Varassova, a huge block of rock. Local tradition tells us that the Titans endeavoured to throw this rock into the sea, so that it might form a bridge between the two coasts; but the rock proved too heavy, and it was dropped where we now see it.

Towards the Ægean Sea the mountain mass of the Katavothra is continued by a coast range running in a direction parallel to the mountains of the island of Eubœa. This range should be described rather as a series of mountain-groups separated from each other by deep hollows, extensive depressions, and even by river valleys. These mountains, though low and intersected by numerous roads, are nevertheless difficult of access, for their slopes are steep, their promontories abrupt, and their precipices sudden, and in the times of the ancient Greeks a small number of men repeatedly defended them against large armies. At one extremity of this range is the passage of Thermopylæ; at the other, on the eastern foot of the Pentelicus, the famous plain of Marathon.

The mountain groups on the northern shore of the Gulf of Corinth, and to the south of Bœotia, may be looked upon as a range running parallel with that following the channel of Eubœa, but far more beautiful and picturesque. Every one of its summits recalls the sweet memories of poetry, or conjures up the image of some ancient deity. To the west we find ourselves in the presence of "double-headed" Parnassus, to which fled Deucalion and Pyrrha, the ancestors of the Greeks, and where the Athenians celebrated their torchlight dances in honour of Bacchus. From the summits of the Parnassus, which rival in height those of the Khiona, raising its pyramidal head towards the north-west, nearly the whole of Greece, with its gulfs, islands, and mountains, lies spread out below us, from the Thessalian Olympus to the Taygetus, at the extremity of the Peloponnesus; and close by, at our feet, lies the admirable basin of Delphi, the place of Peace and Concord, where Greeks forgot their animosities. The mountain group towards the east next to Parnassus is quite equal to it. The valleys of the Helicon, the seat of Apollo and the Muses, are still the most verdant and the most smiling in all Greece. The eastern slope of the Helicon is more especially distinguished for its charming beauty, its woods, its verdant pastures, gardens, and murmuring springs, which contrast most favourably with the bare and arid plains of Bœotia. If Mount Parnassus may boast of the Castalian spring, Mount Helicon possesses that of Hippocrene, which burst forth from the ground when struck by the hoof of Pegasus. The elongated summit of the Cithæron, the birthplace of Bacchus, joins the mountains of Southern Bœotia to those of Attica, whose marble has become famous through the neighbourhood of the city which they shelter. Mount Parnes rises to the north of Athens; to the east of it, like the pediment of a temple, rises the Pentelicus, in which are

the quarries of Pikermi, rendered famous through their fossil bones; on the south appears Mount Hymettus, celebrated for its flowers and its bees. Farther away, the Laurium, with its rich argentiferous slags, stretches towards the south-east, and terminates in Cape Sunium, consecrated in other days to Minerva and Neptune, and still surmounted by fifteen columns of an ancient temple.

Another isolated mountain group to the south of Attica, and occupying the entire width of the Isthmus of Megara, served the Athenians as a rampart of defence against their neighbours of the Peloponnesus. This is the mountain group of Gerania, the modern Pera Khora.* Having passed beyond it, we find ourselves upon the Isthmus of Corinth, properly so called, confined between the Gulfs of Athens and of Corinth. It is a narrow neck of land, scarcely five miles across, whose arid limestone rocks hardly rise two hundred feet above the sea. This neutral bit of territory, lying between two distinct geographical regions, naturally became a place for meetings, festivals, and markets. The remains of a wall built by the Peloponnesians across the isthmus may still be traced, as may also the canal commenced by order of Nero.

The limestone mountains of Greece, as well as those of Epirus and of Thessaly, abound in lakes, but all the rivers are swallowed up in "sinks," or *katavothras*, leaving the land dry and arid. Southern Acarnania, a portion of which is known as Xeromeros, or the "arid country," on account of the absence of running water, abounds in lake basins of this kind. To the south of the Gulf of Arta, which may not inaptly be described as a sort of lake communicating with the sea through a narrow opening, there are several sheets of water, the remains of an inland sea, silted up by the alluvial deposits of the Achelous. The largest of these lakes is known to the natives as Pelagos, or "big sea," because of its extent and the agitated state of its waters, which break against its coasts. This is the Trichonius of the ancient Ætolians. Reputed unfathomable, it is, in truth, very deep, and its waters are perfectly pure; but they are discharged sluggishly into another basin far less extensive, and surrounded by pestilential marshes, and through a turgid stream they even find their way into the Achelous. The hills surrounding Lake Trichonis are covered with villages and fields, whilst the locality around the lower lake has been depopulated by fever. The country, nevertheless, is exceedingly beautiful to look upon. Hardly have we passed through a narrow gorge, or *klisura*, of Mount Zygos before we enter upon a bridge over a mile in length, which a Turkish governor caused to be thrown across the swamps separating the two lakes. This viaduct has sunk down more than half its

* Altitudes of mountains in continental Greece (in feet):—

Gerakavuni (Othrys)	5,673	Liakura (Parnassus)	8,068
Velukhi (Tymphrestus)	7,610	Palæovuni (Helicon)	5,738
Khiona	8,186	Elatea (Cithæron)	4,630
Vardusia	8,242	Parnes	4,645
Katavothra (Œta)	6,560	Pentelicus	3,693
Mountains of Acarnania	5,216	Hymettus	3,400
Varassova	3,010	Gerania (Pera Khora)	4,482

height into the mud, but it is still sufficiently elevated to enable the eye freely to sweep over the surface of the waters, and to trace the coasts which bound them. Oaks, planes, and wild olive-trees intermingle beneath us, their branches hung with festoons of wild vine, and these, with the blue waters of the lake and the mountains rising beyond it, form a picture of great beauty.

Another lake basin lies to the south of the Zygos, between the alluvial lands of the Achelous and the Fidari. It is occupied by a swamp filled with fresh, brackish, or salt water; and since the days of ancient Greece, this swamp, owing to the apathy of the inhabitants, has continued to increase in extent at the expense of the cultivated land. Missolonghi the heroic is indebted for its name to its position near these marshes, for the meaning of it is "centre of marshes." A barrier, or *ramma*, here and there broken through by the floods,

Fig. 12.—Lower Acarnania.

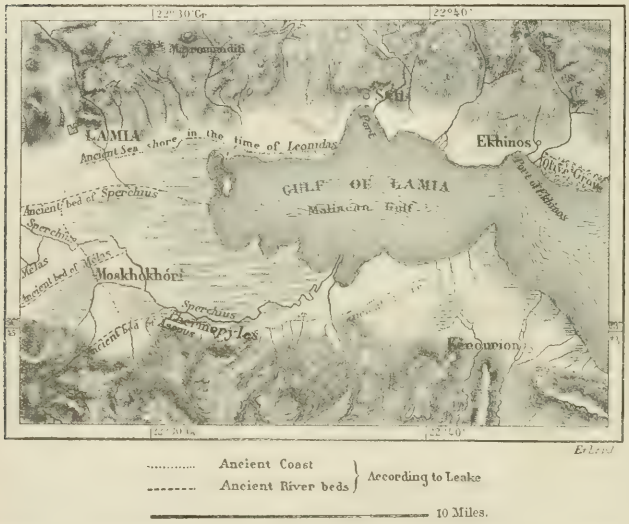
Scale 1 : [illegible].

separates the basin of Missolonghi from the Ionian Sea. During the war of independence every opening in this barrier was protected by redoubts or stockades, but at present the only obstruction consists of the reed barriers of the fishermen, which are opened in spring to admit the fish from the sea, and closed in summer to prevent their escape. Missolonghi, though surrounded by brackish water, is a healthy place, thanks to the breezes from the sea; whilst a heavy atmosphere charged with miasmata hangs perpetually over the bustling little town of Ætoliko (Anatolikon), which lies farther to the north-west in the midst of the swamps, and is joined to the dry land by two bridges. Between Ætoliko and the river Achelous may be observed a large number of rocky eminences, rising like pyramids above the plain. These are no doubt ancient islands, such as still exist between the mainland and the island of St. Mauro. The mud brought down by the Achelous has gradually converted the intervals between these

rocks into dry land. In former times the commercial city of Œniadæ occupied one of these islets. The geological changes already noticed by Herodotus are thus still going on under our eyes, and the muds of the Achelous, to which it owes its modern name of Aspro, or "white," incessantly extend the land at the expense of the sea.

The Achelous, which the ancients likened to a savage bull, owing to its rapid current and great volume, is by far the most important river of Greece. One of the great feats ascribed to Hercules consisted in breaking off one of the horns of this bull; that is to say, he embanked the river, and thus protected the lands which it used to inundate. The neighbours of the Achelous, the

Fig. 13.—Thermopylæ.
From the French Staff Map (1852). Scale 1 : 330,000.



rapid Fidari (Evenus, on the banks of which Hercules killed the centaur Nessus, for offering violence to Dejanira) and the Mornos, which rises in the snows of the Œta, cannot compare with it. Still less is it equalled by the Oropus, the Cephissus, and the Ilissus, "wet only when it rains," which flow eastward into the Ægean Sea. The principal river of Eastern Greece, the Sperchius, is inferior to the Achelous, but, like it, has extensively changed the aspect of the plain near its mouth. When Leonidas and his three hundred heroes guarded the defiles of Thermopylæ against the Persians, the Gulf of Lamia extended much farther into the land than it does now. But the alluvial deposits of the river have extended its delta, and several rivulets which formerly flowed

directly into the sea have now to be numbered amongst its tributaries; the sea has retired from the foot of the Callidromus for a distance of several miles; and the narrow pass of Thermopylæ has been converted into a plain sufficiently wide to enable an entire army to manœuvre upon it. The hot springs which gush from the rocks, by forming deposits of calcareous tufa, may likewise have contributed towards this change of coast-line; nor are more violent convulsions of nature precluded in a volcanic region like this, subject to frequent earthquakes. Sailors still point out a small island in this neighbourhood, formed of scoriæ, from which the incensed Hercules hurled his companion, Lichas, into the ocean. Hot springs abound on the opposite coast of Eubœa, and the incrustations formed by them are so considerable as to assume the appearance of glaciers when seen from a distance. A bathing establishment exists now near the hot sulphur springs of Thermopylæ, and strangers are thus enabled to explore this region, so rich in memories of a great past. The pedestal, however, upon which reposed the figure of a marble lion, placed there in honour of Leonidas, has been destroyed by ruthless hands, and utilised in the construction of a mill!

The basin of the Cephissus, enclosed by the chains of the Œta and Parnassus, is one of the most remarkable from an hydrological point of view. The river first flows through a bottom-land formerly a lake, and then, forcing for itself a passage through a narrow defile commanded by the spurs of Mount Parnassus, it winds round the rock upon which stood the ancient city of Orchomenus, and enters upon a vast plain, where swamps and lakes are embedded amidst cultivated fields and reed-banks. These swamps are fed, likewise, by numerous torrents descending from the Helicon and other mountains in its vicinity. One of these is the torrent of Livadia, into which the bounteous springs of Memory and Oblivion—Mnemosyne and Lethe—discharge themselves. In summer a large portion of the plain is dry, and it yields a bountiful harvest of maize, the stalks of which are sweet like sugar-cane. But after the heavy rains of autumn and winter the waters rise twenty, and even twenty-five feet, and the plain is converted into a vast lake, ninety-six square miles in extent. The myth of the deluge of Ogyges almost leads us to believe that the rising floods occasionally invaded every valley which debouches into this basin. To the ancients the shallower part of this lake was known as Cephissus, and its deep eastern portion as Copais, from Copæ, a town occupying a promontory on its northern shore, and now called Topolias.

The importance of regulating the floods just referred to, and of preventing the sudden overflow of the waters to the destruction of the cultivated fields, may readily be imagined. The ancient Greeks made an effort to accomplish this task. To the east of the large Lake of Copais there is another lake basin, about one hundred and thirty feet lower, and encompassed by precipitous rocks, incapable of cultivation. This basin, the Hylice of the Bœotians, appears to be made by nature for receiving the superabundant waters of the Copais. The remains of a canal may still be traced in the plain, which was evidently intended to convey into

it the floods of the Copais, but it appears never to have been completed. No doubt care was taken to keep open the various *katavothras*, or subterranean channels, through which the waters of the Copaic lake discharge themselves into the sea. One of these, on the north-western shore of the lake, and close to the rock of Orchomenus, swallowed up the river Melas, and conveyed its waters to the Gulf of Atalanta. Farther to the east other subterranean channels flow towards Lakes Hylice and Paralimni, but the most important of these channels are towards the north-east, in the Gulf of Kokkino. In that extreme angle of the lake, the veritable Copais, the waters of the Cephissus rush against the foot of Mount Skroponeri, and are swallowed up by the ground so as to form a subterranean delta. To the south there is a cavernous opening in the rock, but this is merely a sort of tunnel passing underneath a promontory, and, except

Fig. 14.—Lake Copais.
From the French Staff Map. Scale 1 : 500,000.

during the rainy season, it may be traversed dry-shod. Beyond this, another opening swallows up one of the most important branches of the Cephissus, which makes its reappearance in the shape of bounteous springs pouring their waters into the sea. Two other branches of the river disappear in the rocks about a mile farther north. They join soon afterwards, and flow northwards beneath the bottom of a sinuous valley. The old Greek engineers dug pits in this valley, which enabled them to descend to the subterranean waters, and to clear away obstructions interfering with their flow. Sixteen of these pits have been discovered between the opening of the katavothra and the place where the waters reappear. Some of these are still thirty to one hundred feet in depth ; but most of them have become choked up with stones and earth. These ancient engineering works, which Crates vainly endeavoured to restore in the time of Alexander, may possibly date

PEASANTS FROM THE ENVIRONS OF ATHENS.

from the mythical age of King Minyas of Orchomenus,* and the successful draining of these marshes may account for the well-filled treasury of that king spoken of by Homer. Thus the ingenuity of the Homeric age had succeeded in accomplishing a work of the engineering art which baffles our modern men of science!

The whole of Western Greece, filled as it is by the mountains of Acarnania, Ætolia, and Phocis, is condemned by nature to play a very subordinate part to the eastern provinces. In the time of the ancient Greeks these provinces were looked upon almost as a portion of the world of the barbarians, and even in our own days the Ætolians are the least cultivated of all the Greeks. There is no commerce except at a few privileged places close to the sea, such as Missolonghi, Ætoliko, Salona, and Galaxidi. The latter, which is situated on a bay, into which flows the Pleistus, a river at one time consecrated to Neptune, although quite dry during the greater part of the year, was, up to the war of independence, the busiest seapor ton the Gulf of Corinth. As for Naupactus, or Epakto, (called Lepanto by the Italians), it was important merely from a strategical point of view, on account of its position at the entrance of the Gulf of Corinth, which is sometimes named after it. Many naval engagements were fought to force the entrance into the gulf, defended by the castles of Rumelia and Morea—the ancient Rhium and Antirrhium. A curious phenomenon has been observed in connection with the channel which forms the entrance to the Gulf of Corinth. Nowhere more than 36 fathoms in depth, it is subject to perpetual changes in its width, owing to the formation of alluvial deposits by maritime currents. What one current deposits is carried away by the other. At the epoch of the Peloponnesian war this channel was 7 stadia, or about 1,200 yards, wide; at the time of Strabo its width was only 5 stadia; whilst in our own days it is no less than 2,200 yards from promontory to promontory. The entrance of the Gulf of Arta, between the Turkish Epirus and Greek Acarnania, does not present the same phenomena, and its present width is about equal to that assigned to it by every ancient author; that is to say, about 1,000 yards.

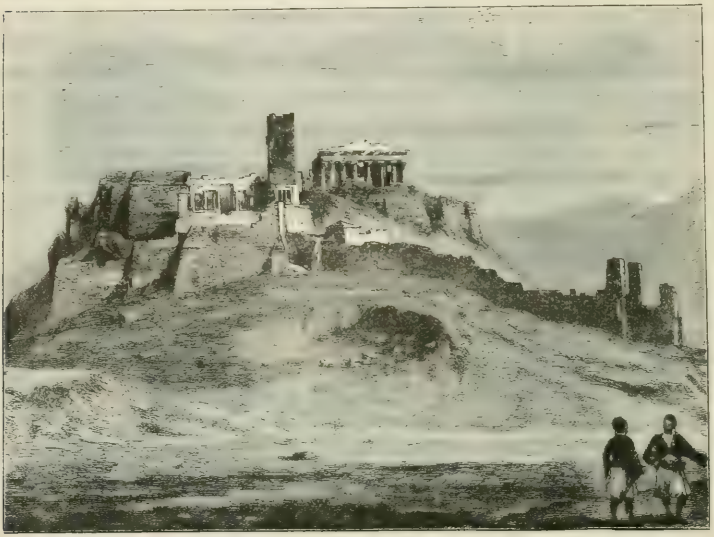
The valleys and lake basins of Eastern Greece, and more especially its position between the Gulf of Corinth, the Ægean Sea, and the channel of Eubœa, which almost convert it into a peninsula, sufficiently account for the prosperity of that country. With its cities of Thebes, Athens, and Megara, it is essentially a land of historical reminiscences. The contrast between the two most important districts of this region—Bœotia and Attica—is very striking. The first of these is an inland basin, the waters of which are collected into lakes, where mists accumulate, and a rich vegetation springs forth from a fat alluvial soil. Attica, on the other hand, is arid. A thin layer of mould covers the terraces of its rocky slopes; its valleys open out into the sea; the summits of its mountains rise into an azure sky; and the blue waters of the Ægean wash their base. Had the Greeks been fearful of the sea; had they confined themselves, as in the earliest

* Orchomenus, a town on the Cephissus, the capital of Northern Bœotia, destroyed by the Thebans 371 B.C.

ages, to the cultivation of the soil, Bœotia, no doubt, would have retained the preponderance which it enjoyed in the time of the Minyæ of wealthy Orchomenus. But the progress of navigation and the allurements of commerce, which proved irresistible to the Greeks, were bound by degrees to transfer the lead to the men of Attica. The city of Athens, which arose in the midst of the largest plain of this peninsula, therefore occupied a position which assured to it a grand future.

The choice of Athens as the modern capital of Greece has been much criticized. Times have changed, no doubt, and the natural centres of commerce have become shifted, in consequence of the migrations of nations. Corinth, on

Fig. 15.—The Acropolis of Athens.



the isthmus joining continental Greece to the Peloponnesus, and commanding two seas, undoubtedly deserved the preference. Its facilities for communicating with Constantinople and the Greek maritime districts still under the rule of the Osmanli, on the one hand, and with the western world, from which now proceed all civilising impulses, on the other, are certainly greater than those of Athens. If Greece, instead of a small centralised kingdom, had become a federal republic, which would have been more in accordance with her genius and traditions, there is no doubt that other towns of Greece, more favourably situated than Athens for establishing rapid communications with the rest of Europe, would soon have surpassed that town in population and commercial wealth. Athens, however, has grown upon its plain, and, by the construction of a railway, it has become even

a maritime city, as in ancient days, when its triple walls joined it to the ports of the Piræus and Phalerum.

But how great the difference between the monuments of the ancient city and of the modern! The Parthenon, though gutted by the shells of the Venetian Morosini, and robbed since of its finest sculptures, still retains its pure and simple beauty, which agrees so well with the sobriety of the surrounding landscape—still remains the finest architectural work of the world. By the side of this majestic ruin, on the same plateau of the Acropolis, where the mariner in the Gulf of Ægina saw the gilt spear-head of Athene Promachos glitter in the sun, there rise other monuments, the Erechtheum and the Propylæa, hardly inferior to it, and dating likewise from the great period of art. Outside the city, on a

Fig. 16.—Athens and its Long Walls.
According to Kiepert and Schrank. Scale 1 : 111,000.

promontory, rises the temple of Theseus, the best-preserved monument of Greek antiquity. Elsewhere, on the banks of the Ilissus, a group of columns marks the site of the magnificent temple of Olympian Jupiter, which it took the Athenians seven hundred years to build, and which their degenerate descendants made use of as a quarry. Remarkable remains have been discovered in many other parts of the ancient city, and the least of them are of interest, for they recall the memory of illustrious men. On such a rock sat the Areopagus which condemned Socrates; from this stone tribune Demosthenes addressed the multitude; and here walked Plato with his disciples!

A similar historical interest attaches to nearly every part of Attica, whether we visit the city of Eleusis, where the mysteries of Ceres were celebrated, or the

city of Megara, with its double Acropolis, or whether we explore the field of Marathon and the shores of the island of Salamis. Even beyond Attica the memories of the past attract the traveller to Platæa, to Leuctra, Chæronea, Thebes of Œdipus, and Orchomenus of Minyas, though, in comparison with what these districts were in other times, they are now deserts. In addition to Athens and Thebes, there are now only two cities in eastern continental Greece which are of any importance. These are Lamia, in the midst of the low plains of the Sperchius, and Livadia, in Bœotia, at one time celebrated for the cavern of Trophonius, which archæologists have not yet succeeded in identifying. The island of Ægina, which belongs to Attica, offers the same spectacle of decay and depopulation as the mainland. Anciently it supported more than two hundred thousand inhabitants; at present it hardly numbers six thousand. But the island

Fig. 17.—Ancient Athens.
According to Kiepert and Schmidt. Scale 1 : 30,000.

still retains the picturesque ruin of its temple of Minerva, and the prospect which it affords of the amphitheatre of hills in Argolis and Attica is as magnificent as ever.

III.—The Morea, or Peloponnesus.

Geographically the Peloponnesus well deserves the name of island, which was bestowed upon it by the ancients. The low Isthmus of Corinth completely severs it from the mountainous peninsula of Greece. It is a world in itself, small enough as far as the mere space is concerned which it occupies upon the map, but great on account of the part it has played in the history of humanity.

On entering the Peloponnesus from the Isthmus of Corinth, we see rising in front of us the mountain rampart of Oneium, which defended the entrance of the peninsula, and upon one of whose promontories was built the nearly impregnable citadel of Corinth. These mountains form part of the general mountain system of the whole island, and, sheltered by them, its inhabitants could live in security. The principal mountain mass, whence all other chains radiate towards the entrances of the peninsula, is situated in the interior of the country, about forty miles to the west of Corinth. There Mount Cyllene of the ancient Greeks, or Zyria, rises into the air, its flanks covered with dark pines; and farther away still, the Khelmos, or Aroanian Mountain, attains even a more considerable height, its snows descending into a valley on its northern slope, where they give rise to the river Styx, the cold waters of which prove fatal to perjurers, and disappear in a narrow chasm, one of the entrances to Hades. A range of wooded peaks, to the west of the Khelmos, connects that mountain with the Olonos (Mount Erymanthus), celebrated as the haunt of the savage boar destroyed by Hercules. All these mountains, from Corinth as far as Patras, form a rampart running parallel with the southern shore of the gulf, in the direction of which they throw off spurs enclosing steep valleys. In one of these—that of Buraikos—we meet with the grand caverns of Mega-Spileon, which are used as a monastery, and where the most curious structures may be seen built up on every vantage-ground offered by the rocks, suggesting a resemblance to the cells of a vast nest of hornets.

The table-land of the Peloponnesus is thus bounded towards the north by an elevated coast range. Another chain of the same kind bounds it on the east. It likewise starts from Mount Cyllene, and extends southward, its various portions being known as Gaurias, Malevo (Mount Artemisium), and Parthenion. It is then broken through by a vast depression, but again rises farther south as the range of Hagios Petros, or Parnon, to the east of Sparta. Getting lower by degrees, it terminates in the promontory of Malea, opposite to the island of Cerigo. It was this cape, tradition tells us, which formed the last refuge of the Centaurs; that is to say, of the barbarian ancestors of the modern Tsakonians. No promontory was more dreaded by Greek navigators than this Cape Malea, owing to sudden gusts of wind, and an ancient proverb says, "When thou hast doubled the cape forget the name of thy native land."

The mountains of Western Morea do not present the regularity of the eastern chain. They are cut through by rivers, and to the south of the Aroanian Mountains and the Erymanthus they ramify into a multitude of minor chains, which now and then combine into mountain groups, and impart the most varied aspect to that portion of the plateau. Everywhere in the valleys we come unexpectedly upon landscapes to which an indescribable charm is imparted by a group of trees, a spring, a flock of sheep, or a shepherd sitting upon a heap of ruins. We are in beautiful Arcadia, sung by the poets. Though in great part deprived of its woods, it is still a beautiful country; but more charming still are the eastern slopes of the plateau, which descend towards the Ionian Sea. There luxuriant forests and

sparkling rivulets add an element of beauty to blue waves, distant islands, and a transparent sky, which is wanting in nearly every other part of maritime Greece.

The table-land of Arcadia is commanded on the west by pine-clad Mænalus, and bounded on the south by several mountain groups which give birth to separate mountain chains. One of these mountain masses—the Kotylion, or Palæocastro—thus gives rise to the mountains of Messenia, amongst which rises the famous Ithome, and to those of Ægaleus, which spread over the peninsula to the west of the Gulf of Coron, and reappear in the sea as the rocky islets of Sapienza,

Fig. 18.—Mount Taygetus.

Cabrera, and Venetikon. Another mountain mass, the Lycæus, or Diaforti—the Arcadian Olympus, which the Pelasgians claim for their cradle—and which rises almost in the centre of the Peloponnesus, is continued westward of Laconia by an extended mountain chain, the most elevated and most characteristic of all the Morea. The highest crest of these mountains is the famous Taygetus, known also as Pentedactylos (five thumbs), because of the five peaks which surmount it; or as St. Elias, in honour, no doubt, of Helios, the Dorian sun-god. A portion of the lower slopes of this mountain is clothed with forests of chestnuts and walnuts,

interspersed with cypresses and oaks; but its crest is bare, and snow remains upon it during three-fourths of the year. The snows of Taygetus direct the distant mariner to the shores of Greece. On approaching the coast, he sees rising above the blue waters the spurs and outlying ridges of the Kakavuni, or "bad mountain." Soon afterwards he comes in sight of the promontory of Tainaron, with its two capes of Matapan and Grasso—immense blocks of white marble more than six hundred feet in height, upon which the quails settle in millions after their fatiguing journey across the sea. Into the caverns at its foot the waters rush with a dull noise which the ancients mistook for the barking of Cerberus. Cape Matapan, like Malea, is dreaded amongst mariners as a great "destroyer of men."

The three southern extremities of the Peloponnesus are thus occupied by high mountains and rocky declivities. The peninsula of Argolis, in the east, is likewise traversed by mountain ranges, which start from Mount Cyllene, similarly to the Gaurias and the mountains of Arcadia. The whole of the Peloponnesus is thus a country of table-lands and mountain ranges. If we except the plains of Elis, which have been formed by the alluvial deposits carried down by the rivers of Arcadia, and the lake basins of the interior, which have been filled up in the course of ages, we meet with nothing but mountains.* The principal mountain masses—the Cyllene, the Taygetus, and Parnon—are composed of crystalline schists and metamorphic marbles, as in continental Greece. Strata of the Jurassic age and beds of cretaceous limestone are here and there met with at the foot of these more ancient rocks. Near the coast, in Argolis, and on the flanks of the Taygetus, irruptions of serpentines and porphyries have taken place, whilst on the north-eastern coast of Argolis, and especially on the small peninsula of Methone, there exist recent volcanoes—amongst others, the Kaimenipetra, which M. Fouqué identifies with the fire-vomiting mouths of Strabo, and which had its last eruption twenty-one centuries ago. These volcanoes are, no doubt, the vents of a submarine area of disturbance which extends through Milos, Santorin, and Nisyros, to the south of the Ægean Sea.

The sulphur springs which abound on the western coast of the Peloponnesus are, perhaps, likewise evidences of a reaction of the interior of the earth.

It is the opinion of several geologists that the coasts of Western Greece are being insensibly upheaved. In many places, and particularly at Corinth, we meet with ancient caverns and sea beaches at an elevation of several feet above the sea-level. It is this upheaval, and not merely the alluvial deposits brought down by rivers, which explains the encroachment of the land upon the sea at the mouth of the Achelous and on the coast of Elis, where four rocky islets have been joined to the land. Elsewhere a subsidence of the land has been noticed, as in the Gulf of

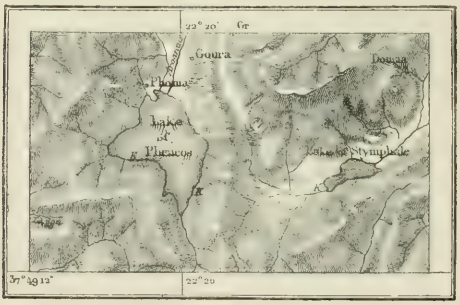
* Heights of the principal mountains in the Peloponnesus (in English feet):—

Cyllene (Zyria)	8,940	Lycæus (Diaforti)	4,660
Arcanian Mountain (Khelmos)	7,736	Ithome	2,630
Erymanthus (Olonos)	7,297	Taygetus	7,904
Artemisium (Malevo)	5,814	Arachnæus (Argolis)	3,935
Parnon (Hagios Petros)	6,955	Mean height of peninsula	2,000

Marathonisi and on the eastern coast of Greece, where the ancient peninsula of Elaphonisi has been converted into an island. But even there the fluvial deposits have encroached upon the sea. The city of Calamata is twice as distant from the seashore now as in the days of Strabo, and the traces of the ancient haven of Helos, on the coast of Laconia, are now far inland.

The limestone rocks of the interior of the Peloponnesus abound as much in chasms, which swallow up the rivers, as do Bœotia and the western portion of the whole of the Balkan peninsula. Some of these katavothras are mere sieves, hidden beneath herbage and pebbles, but others are wide chasms and caverns, through which the course of the underground waters may be readily traced. In winter wild birds post themselves at the entrances of these caverns, in expectation of the prey which the river is certain to carry towards them; in summer, after the waters have retired, foxes and jackals again take possession of their accustomed dens. The

Fig. 19.—Lakes Pheneä and Stymphalus.
From the French Staff Map. Scale 1 : 500,000.



water swallowed up by these chasms on the plateau reappears on the other side of the mountains in the shape of springs, or *kephalaria* (*kephalovrysis*). The water of these springs has been purified by its passage through the earth, and its temperature is that of the soil. It bursts forth sometimes from a crevice in the rocks, sometimes in an alluvial plain, and sometimes even from the bottom of the sea. The subterranean geography of Greece is not yet sufficiently known to enable us to trace each of these kephalaria to the katavothras which feed them.

The ancients were most careful in keeping open these natural funnels, for, by facilitating the passage of the water, they prevented the formation of swamps. These precautions, however, were neglected during the centuries of barbarism which overcame Greece, and the waters were permitted to accumulate in many places at the expense of the salubrity of the country. The plain of Pheneus, or Phonia, a vast chasm between the Aroanian Mountains and the Cyllene, has thus repeatedly been converted into a lake. In the middle of last century the whole of this basin

was filled with water to a depth of more than 300 feet. In 1828, when this sheet of water had already become considerably reduced, it was still 6 miles long and 150 feet in depth. At length, a few years afterwards, the subterranean sluices opened, the waters disappeared, and there remained only two small marshes near the places of exit. But in 1850 the lake was again 200 feet in depth. Hercules, we are told, constructed a canal to drain this valley and to cleanse its subterranean outlets, but the inhabitants content themselves now with placing a grating above the "sink-holes," to prevent the admission of trunks of trees and of other large objects carried along by the floods.

To the east of the valley of Pheneus, and on the southern foot of Mount Cyllene, there is another lake basin, celebrated in antiquity because of the man-eating birds which infested it, until they were exterminated by Hercules. This is the Stymphalus, alternately lake and cultivated land. During winter the waters cover about one-third of the basin; but it happens occasionally, after heavy rains, that the lake resumes its ancient dimensions. There is only one katavothra through which the waters can escape, and this, instead of being near the shore, as usual, is at the bottom of the lake. It swallows up not only the water of the lake, but likewise the vegetable remains carried into it, and the mud formed at its bottom; and this detritus is conveyed through it to some subterranean cavity, where it putrefies slowly, as may be judged from the fetid exhalations proceeding from the katavothra. The water, however, is purified, and when it reappears on the surface, close to the seashore, it is as clear as crystal.

There are many other lake basins of the same kind between the mountains of Arcadia and the chain of the Gaurias. They all have their swamps or temporary lakes, but the katavothras, in every instance, are sufficiently numerous to prevent an inundation of the entire valley. The most important of these lake basins is formed by the famous plain of Mantinea, upon which many a battle was fought. From an hydrological point of view this is one of the most curious places in the world; for the waters which collect there are discharged into two opposite seas—the Gulf of Nauplia on the east, and in the direction of the Alpheus and the Ionian Sea towards the west. There may exist even some subterranean rivulet which discharges itself, towards the south, into the Eurotas and the Gulf of Laconia.

The disappearance of the waters underground has condemned to sterility several parts of the Peloponnesus, which a little water would convert into the most fertile regions of the globe. The surface waters quickly suck up and form subterranean rivers, hidden from sight, which only see the light again, in most instances, near the seashore, when it is impossible to utilise them. The plain of Argos, though surrounded by a majestic amphitheatre of well-watered hills, is more sterile and arid even than are Megara and Attica. Its soil is always dry, and soaks up water like a sieve, which may have given rise to the fable of the Danaids. But to the south of that plain, where there is but a narrow cultivable strip of land between the mountains and the seashore, a great river bursts forth from the rocks. This is the Erasinus, or the "amiable," thus called on account of the purity of its water. Other springs burst forth at the southern extremity of the plain, close to the defile

of Lerna, which, like that of the Erasinus, are supposed to be fed from Lake Stymphalus. Close to them is a chasm filled with water, said to be unfathomable. It abounds in tortoises, and venomous serpents inhabit the adjoining marsh. These are the *kephalaria*, or "heads," of the ancient hydra of Lerna, which Hercules found it so difficult to seize hold of. Still farther south there is another spring which rises from the bottom of the sea, more than three hundred yards from the

Fig. 20.—The Plateau of Mantinea.
From the French Staff Map. Scale 1 : 40,000.

shore. This spring—the Doinæ of the ancients, and Anavula of modern Greek mariners—is, in reality, but the mouth of one of the rivers swallowed up by the katavothras of Mantinea. When the sea is still it throws up a jet rising to a height of fifty feet.

Analogous phenomena may be witnessed in the two southern valleys of the peninsula, those of Sparta and Messenia. The Iri, or Eurotas, is, in reality, but a large rivulet, which discharges itself into the Gulf of Marathonisi, at the end of a gorge,

through which the waters of the Lake of Sparta forced themselves a passage during some ancient deluge; but it is only on rare occasions that its volume of water is sufficient to remove the bar which obstructs its mouth. The Vasili-Potamo ("royal river"), on the other hand, which bursts forth at the foot of a rock a short distance from the Eurotas, though its whole course does not exceed five miles, discharges a considerable volume of water throughout the year, and its mouth is at all times open. As to the river of Messenia, the ancient Pamisus, now called Pirnatza, it is the only river of Greece, besides the Alpheus, which forms a harbour at its mouth, and it can be ascended by small vessels for a distance of eight miles; but this advantage it owes exclusively to the powerful springs of Hagios Floros, which are fed by the mountains on the east. These springs, which form a large swamp

Fig. 21.—Bifurcation of the Gastuni.
From the French Staff Map. Scale 1: 400,000.

where they rise to the surface, are the real river, if volume of water is to be decisive, and the country watered and fertilised by them was called the "Happy" by the ancients, on account of its fertility.

The western regions of the Peloponnesus receive more rain, and they are likewise in the possession of the most considerable river, the Alpheus, now called Ruphia, from one of its tributaries. The latter, the ancient Ladon, conveys a larger volume of water towards the sea than the Alpheus. It was as celebrated amongst the Greeks as was the Peneus of Thessaly, on account of the transparency of its waters, and the smiling scenery along its banks. It is partly fed by the snows of Mount Erymanthus, and, like most rivers of the Morea, derives a portion of its waters from subterranean tributaries rising on the central plateau. The Ladon thus receives the waters of Lake Phenea, whilst the Alpheus proper

is fed in its upper course from katavothras on the shores of the ancient lakes of Orchomenus and Mantinea. Having traversed the basin of Megalopolis, anciently a lake, it passes through a series of picturesque gorges, and reaches its lower valley. A charming tradition, illustrative of the ties of amity which existed between Elis and Syracuse, makes this river plunge beneath the sea and reappear in Sicily, close to the fountain of his beloved Arethusa. The ancient Greeks, who witnessed the disappearance of so many rivers, would hardly have looked upon this submarine course of the Alpheus as a thing to wonder at.

The Alpheus and all other rivers of Elis carry down towards the sea immense masses of detritus, which they spread over the plains extending from the foot of the mountains to the seashore. The ruins of Olympia disappeared in this manner beneath alluvial deposits. They have all frequently changed their beds, and not one amongst them has done so more frequently than the Peneus, or river of Gastuni. Anciently it discharged its waters to the north of the rocky promontory of Chelonatas, whilst in the present day it turns abruptly to the south, and enters the sea at a distance of fifteen miles from its ancient mouth. Works of irrigation may partly account for this change, but there can be no doubt that nature unaided has by degrees much modified the aspect of this portion of Greece. Islands originally far in the sea have been joined to the land; numerous open bays have gradually been cut off from the sea by natural embankments, and transformed into swamps or lagoons. One of the latter extends for several leagues to the south of the Alpheus, and is divided from the sea by a fine forest of pines. These majestic forests, in which the Triphylians paid honour to their dead, the surrounding hills dotted over with clumps of trees, and Mount Lycæus, from whose flanks are precipitated the cascades dedicated to Neda, the nurse of Jupiter, render this the most attractive district of all the Morea to a lover of nature.

The Peloponnesus presents us with one of the most striking instances of the influence exercised by the nature of the country upon the historical development of its inhabitants. Held to Greece by a mere thread, and defended at its entrance by a double bulwark of mountains, this "isle of Pelops" naturally became the seat of independent tribes at a time when armies still recoiled from natural obstacles. The isthmus was open as a commercial high-road, but it was closed against invaders.

The relief of the peninsula satisfactorily explains the distribution of the tribes inhabiting it, and the part they played in history. The whole of the interior basin, which has no visible outlets towards the sea, naturally became the home of a tribe who, like the Arcadians, held no intercourse with their neighbours, and hardly any amongst themselves. Corinth, Sicyon, and Achaia occupied the seashore on the northern slopes of the mountains, but were separated by high transversal chains. The inhabitants of these isolated valleys long remained strangers to each other, and when at length they combined to resist the invader, it was too late. Elis, in the west, with its wide valleys and its insalubrious plains extending along a coast having no havens, naturally played but a secondary part

in the history of the peninsula. Its inhabitants, exposed to invasions, owing to their country being without natural defences, would soon have been enslaved, had they not placed themselves under the protection of all the rest of Greece by converting their plain of Olympia into a place of meeting, where the Hellenes of Europe and of Asia, from the continent and from the islands, met for a few days' festival to forget their rivalries and animosities. The basin of Argos and the mountain peninsula of Argolis, on the eastern side of the Peloponnesus, on the other hand, are districts having natural boundaries, and are easily defended. Hence the Argolians were able to maintain their autonomy for centuries, and even in the Homeric age they exercised a sort of hegemony over the remainder of Greece. The Spartans were their successors. The country in which they established themselves possessed the double advantage of being secure against every attack, and of furnishing all they stood in need of. Having firmly established themselves in the beautiful valley of the Eurotas, they found no difficulty in extending their power to the seashore, and to the unfortunate Helos. At a later date they crossed the heights of the Taygetus, and descended into the plains of Messenia. That portion of Greece likewise formed a natural basin, protected by elevated mountain ramparts; and the Messenians, who were kinsmen of the Spartans and their equals in bravery, were thus able to resist for a century. At length they fell, and all the Southern Peloponnesus acknowledged the supremacy of Sparta, which was now in a position to assert its authority over the whole of Greece. Then it was that the mountain-girt plateau on the road from Lacedæmonia to Corinth, upon which stood the cities of Tegea and Mantinea, and which was made by nature for a field of Mars, became the scene of strife.

The Peloponnesus, with its sinuous shores, forms a remarkable contrast to Attica. Its characteristics are essentially those of a continent, and anciently the Peloponnesians were mountaineers rather than mariners. Except in Corinth, where the two seas nearly join, and a few towns of Argolis, which is another Attica, there were no inducements for the inhabitants to engage in maritime commerce; and in their mountain valleys and upland plains they were entirely dependent upon the rearing of cattle and husbandry. Arcadia, in the centre of the peninsula, was inhabited only by herdsmen and labourers; and its name, which originally meant "country of bears," has become the general designation for an emir atly pastoral country. The Laconians also, separated from the sea by rocky mountains which hem in the valley of the Eurotas at its point of issue, preserved for a long time the customs of warriors and of cultivators of the soil, and took to the sea only with reluctance. "When the Spartans placed Eurotas and Taygetus at the head of their heroes," says Edgar Quinet, "they distinctly connected the features of the valley with the destinies of the people by whom it was occupied."

In the very earliest ages the Phœnicians already occupied important factories on the coasts of the Peloponnesus. They had established themselves at Nauplia, in the Gulf of Argos; and at Cranæ, the modern Marathonisi or Gythion, in Laconia, they purchased the shells which they required to dye their purple

cloths. The Greeks themselves were in possession of a few busy ports, amongst which was "sandy Pylos," the capital of Nestor, whose position is now held by Navarino, on the other side of the gulf. At a subsequent date, when Greece had become the centre of Mediterranean commerce, Corinth, so favourably situated between the two seas, rose into importance, not because of its political influence, its cultivation of the arts, or love of liberty, but through the number and wealth of its inhabitants. It is said that it had a population of three hundred thousand souls within its walls. Even after it had been razed by the Romans it again recovered its ancient pre-eminence. But the exposed position of the town has caused it to be ravaged so many times that all commerce has fled from it. In 1858, when an earthquake destroyed Corinth, that once famous city had dwindled down into a poor village. The city has been rebuilt about five miles from its ancient site, on the shore of the gulf named after it, but we doubt whether it will ever resume its ancient importance unless a canal be dug to connect the two seas. The high-roads from Marseilles and Trieste to Smyrna and Constantinople would then lead across the Isthmus of Corinth, and this canal might attract an amount of shipping equal to that which frequents other ocean channels or canals similarly situated. But for the present the isthmus is almost deserted, and only the passengers who are conveyed by Greek steamers to the small ports on its opposite shores cross it. The ancients, who had failed in the construction of a canal, and who made no further effort after the time of Nero, because they imagined one of the two seas to be at a higher level than the other, had provided, at all events, a kind of tramway, by means of which their small vessels could be conveyed from the Gulf of Corinth to the Ægean Sea.*

After the Crusades, when the powerful Republic of Venice had gained a footing upon the coasts of Morea, flourishing commercial colonies arose along them, in Arcadia, on the island of Prodano (Prote), at Navarino, Modon, Coron, Calamata, Malvoisie, and Nauplia in Argolis. At the call of these Venetian merchants the Peloponnesus again became a seat of trade, and resumed, to some extent, that part in maritime enterprise which it had enjoyed in the time of the Phœnicians. But the advent of the Turk, the impoverishment of the soil, and the civil wars which resulted therefrom, again forced the inhabitants to break off all intercourse with the outer world, and to shut themselves up in their island as in a prison. Tripolis, or Tripolitza, in the very centre of the peninsula, and called thus, it is said, because it is the representative of three ancient cities—Mantinea, Tegea, and Pallantium—then became the most populous place. Since the Greeks have regained their independence life again fluctuates towards the sea-shore as by a sort of natural sequence. Patras, close to the entrance of the Gulf of Corinth, and near the most fertile and best-cultivated plains on the eastern shore, is by far the most important city at present, and, in anticipation of its future extension, the streets of a new town have been laid out, in the firm belief that it will some day rival Smyrna and Trieste in extent.

* The isthmus is 6,496 yards wide, and rises to a height of 250 feet where it is narrowest, its mean height being 130 feet.

The other towns of the peninsula, even those which exhibited the greatest activity during the dominion of the Venetians, are but of very secondary importance, if we compare them with this emporium of the Peloponnesus. Ægium, or Vostitza, on the Gulf of Corinth, is a poor port, less celebrated on account of its commerce than in consequence of a magnificent plane-tree, more than fifty feet in girth, the hollow trunk of which was formerly used as a prison. Pyrgos, close to Alphea, has no port at all. The fine roadstead of Navarino, defended against winds and waves by the rocky islet of Sphacteria, is but little

Fig. 22.—The Valley of the Eurotas.
From the French Staff Map. Scale 1:370,000.

frequented, and the merchantmen riding at anchor there never outnumber the Turkish men-of-war at the bottom, where they have lain since the battle fought in 1828. Modon and Coron have likewise fallen off. Calamata, at the mouth of the fertile valleys of Messenia, has an open roadstead only, and vessels cannot always ride in safety upon it. The celebrated Malvoisie, now called Monemvasia, is hardly more than a heap of ruins, and the vineyards in its neighbourhood, which furnished the exquisite wine named after the town, have long ceased to exist. Nauplia, which was the capital of the modern kingdom of Greece during the first few years of its existence, possesses the advantage of a well-

sheltered port; but its walls, its bastions, and its forts give it the character of a military town rather than of a commercial one.

The towns in the interior of the country, whatever glories may attach to them, are hardly more now than large villages. The most celebrated of all, Sparta, thanks to the fertility of its environs, promises to become one of the most prosperous cities of the interior of the Peloponnesus. Sparta—that is, the "scattered city," —was named thus because its houses were scattered over the plain, defended only by the valour of their inhabitants, and not by walls. In the Middle Ages Sparta was supplanted by the neighbouring Mistra, whose decayed Gothic buildings and castles occupy a steep hill on the western side of the Eurotas; but it has now recovered its supremacy amongst the towns of Laconia. Argos, which is more ancient even than the city of Lacedæmon, has likewise risen anew from its ruins; for the plain in which it lies, though occasionally dried up, is of great natural fertility.

Strangers, however, who explore the countries of the Peloponnesus, do not go in search of these newly risen cities, where a few stones only remind them of the glories of the past, but are attracted by the ancient monuments of art. In that respect Argolis is one of the richest provinces of Greece. Near to Argos the seats of an amphitheatre are cut into the steep flanks of the hill of Larissa. Between Argos and Nauplia a small rock rises in the middle of the plain, which is surmounted by the ancient Acropolis of Tiryns, the Cyclopean walls of which are more than fifty feet in thickness. A few miles to the north of Argos are the ruins of Mycenæ, the city of Agamemnon, where the celebrated "Gate of Lions," coarsely sculptured when Greek art first dawned, and the vast vaults known as the Treasury of the Atrides, mainly attract the attention of visitors. These vaults are amongst the oldest and best-preserved antiquities of Greece. They exhibit most solid workmanship, and one of the stones, which does duty as a lintel over the entrance-gate, weighs no less than one hundred and sixty-nine tons. At Epidaurus, in Argolis, on the shores of the Gulf of Ægina, and close to the most famous temple of Æsculapius, we still meet with a theatre which has suffered less from time than any other throughout Greece. Shrubs, interspersed with small trees, surround it; but we can still trace its fifty-four rows of white marble seats, capable of affording accommodation to twelve thousand spectators. Amongst other famous ruins of Argolis are the beautiful remains of a temple of Jupiter at Nemea, and the seven Doric columns of Corinth, said to be the oldest in all Greece. But the most beautiful edifice of the peninsula must be sought for near Arcadian Phigalia, in the charming valley of the Neda. This is the temple of Bassæ, erected by Ictinus in honour of Apollo Epicurius, and its beauty is enhanced by the oaks and rocks which surround it.

Citadels, however, are the buildings we most frequently meet with; and many a fortified place, with its walls and acropolis, yet exists as in the days of ancient Greece. The walls of Phigalia and Messenia still have their ancient towers, gates, and redoubts. Other fortifications were utilised by the Crusaders, Venetians, or Turks, and by them furnished with crenellated walls and keeps, which add another picturesque feature to the landscape. One of these ancient

fortresses, transformed during the Middle Ages, rises at the very gates of the Peloponnesus—namely, the citadel of Corinth, the strongest and most commanding of all.

Several of the islands of the Ægean Sea must be looked upon as natural dependencies of the Peloponnesus, to which submarine ledges or shoals attach them.

The islands along the coast of Argolis, which are inhabited by Albanian seamen, who were amongst the foremost to fight the Turk during the struggle for Hellenic independence, have lost much of their former commercial importance. Poros, a small Albanian town on a volcanic island of the same name, which the revolted people chose for their capital, is, however, still a bustling place, for it has an excellent harbour, and the Greek Government has made it the principal naval station of the kingdom. Hydra, on the other hand, and the small island of Spezzia, next to it, have lost their former importance. They are both rocky islands, without arable soil, trees, or water, and yet they formerly supported a population of fifty thousand souls. About 1730 a colony of Albanians, weary of the exactions of some Turkish pasha on the mainland, fled to the island of Hydra. They were left in peace there, for they agreed to pay a trifling tribute. Their commerce—leavened, to be sure, with a little piracy—assumed large dimensions, and immediately before the war of independence the Albanians of Hydra owned nearly 400 vessels of 100 to 200 tons each, and they were able to send over 200 vessels, armed with 200 guns, against the Turks. By engaging so enthusiastically in this struggle for liberty, the Hydriotes, without suspecting it, wrought their own ruin. No sooner was the cause of Greece triumphant than the commerce of Hydra was transferred to Syra and the Piræus, which are more favourably situated.

Cythera of Laconia, a far larger island than either of those mentioned, and better known by the Italian name of Cerigo, formed a member of the Septinsular Republic, although not situated in the Ionian Sea, and clearly a dependency of the Peloponnesus. Cythera is no longer the island of Venus, and its voluptuous groves have disappeared. Seen from the north, it resembles a pile of sterile rocks. It nevertheless yields abundant harvests, possesses fine plantations of olive-trees, and populous villages. Cerigo, in former times, enjoyed considerable importance, owing to its position between the Ionian Sea and the Archipelago; but Cape Malea has lost its terrors now, and the harbour of refuge on the island is no longer sought after. Heaps of shells, left there by Phœnician manufacturers of purple, have been found on the island; and it was the Phœnicians who introduced the worship of Venus Astarte.

IV.—The Islands of the Ægean Sea.

Islands and islets are scattered in seeming disorder over the Ægean Sea, the name of which may probably mean "sea of goats," because these islands appeared at a distance like goats. By a singular misapplication the modern term

Archipelago, instead of sea, is now used to designate these groups of islands. The Sporades, in the north, form a long range of islands stretching in the direction of Mount Athos. The island of Scyros, farther south, the birthplace of Achilles and place of exile of King Theseus, occupies an isolated position; the large island of Eubœa extends along the coast of the continent; and in the distance rise the white mountains of the Cyclades, likened by the ancient Greeks to a circle of Oceanides dancing around a deity.

All these islands are so many fragments of the mainland. This is proved by

Fig. 23.—Euripus and Chalcis.
Scale 1 : 220,000.

their geological structure, or by shoals which attach them to the nearest coast. The Northern Sporades are a branch of Mount Pelion. Eubœa is traversed by limestone mountains of considerable height, running parallel to the chains of Attica, Argolis, Mount Olympus, and Mount Athos. Scyros is a rocky mountain mass, whose axis runs in the same direction as that of the central chain of Eubœa. The summits of the Cyclades continue the ranges of Eubœa and Attica towards the south-east, and the same micaceous and argillaceous schists, limestones, and crystalline marbles are found in them. They are, indeed, "mountains of Greece

scattered over the sea." If Athens may boast of the quarries of Mount Pentelicus, the Cyclades produce the glittering marbles of Naxos, and the still more beautiful ones of Paros, from which were chiselled the statues of heroes and of gods. Curious caverns are met with in the limestone of the islands, especially that of Antiparos, the existence of which was not known to the ancients, and the Cave of Sillaka, on the island of Cythnos, or Thermia, celebrated for its hot springs. Granite is found on some of the islands, and particularly in the small island of Delos, dedicated to the worship of Apollo and Diana. In the south, finally, the Cyclades are traversed by a chain of volcanic islands, extending from the peninsula of Methana, in Argolis, to Cos and the shores of Asia Minor.

Eubœa may be looked upon almost as a portion of the continent, for the strait which separates it from the mainland resembles a submerged longitudinal valley, and is nowhere of great depth or width. At its narrowest part it is no more than two hundred and fourteen feet across, and from the most remote times, Chalcis, the capital of the island, has been joined to the mainland by a bridge. The irregular tidal currents flowing through this strait were looked upon as marvellous by the Greeks, and Aristotle is said to have flung himself into it because he was unable to explain this phenomenon. The Italian name of the island, Negroponte, is formed by a series of corruptions from Euripus, by which name the ancients knew the strait between the island and the mainland. Eubœa has at all times shared in the vicissitudes of the neighbouring provinces of Attica and Bœotia. When the cities of Greece were at the height of their glory, those of Eubœa—Chalcis, Eretria, and Cerinthus—enjoyed likewise a high degree of prosperity, and dispatched colonies to all parts of the Mediterranean. Later on, when invaders ravaged Attica, Eubœa shared the same fate, and at present it participates in every political and social movement of the neighbouring continent.

In Northern Eubœa there are forests of oaks, pines, elms, and plane-trees; the villages are embedded in orchards; and the surrounding country resembles what we have seen in Elis and Arcadia. But in the Cyclades we look in vain for charming landscapes. Foliage and running water abound only in a very few spots. Arid rocks, more arid even than those on the coast of Greece, predominate, and only in a few favoured spots do we meet with a few olive-trees, valonia oaks, pines, and fig-trees. Everywhere else the hills are naked. And yet these islands arouse feelings of devotion in us, for their names are great in history. The highest summits of most of them have been named after the prophet Elias, the biblical successor of Apollo, the god of the sun; and justly so, for the sun reigns supreme upon these austere rocks, and his scorching rays destroy every vestige of vegetation.

Antimilos, one of the uninhabited islands of this group, still affords an asylum to the wild goat (*Capra Caucasica*), which has disappeared from the remainder of Europe, and is met with only in Crete, and perhaps Rhodes. Wild pigs likewise haunt the rocks of Antimilos. Rabbits were introduced from the West, and abound in the caverns of some of the Cyclades, and especially on Myconus and Delos. The ancient authors never mention these animals. It is a curious fact that

hares and rabbits never inhabit the same island, with the sole exception of Andros, where the hares occupy the extreme north, whilst the rabbits have their burrows in the southern portion of the island. As a curiosity, we may also mention that a large species of lizard, called crocodile by the inhabitants, is found on the islands, but not on the neighbouring continent, and we may conclude from this that the Cyclades were separated from the Balkan peninsula at a very remote period.

A chain of volcanic islands bounds the Cyclades towards the south, where they are separated from Crete by an ocean trough of great depth. Milos is the most important of these islands. It has an irregularly shaped crater, which has been

Fig. 24.—Nea Kaimeni.
According to Danfalik.

invaded by the sea, and forms there one of the safest and most capacious harbours of refuge in the Mediterranean. Milos has had no eruption within historic times, but the existence of solfataras and of hot springs proves that its volcanic forces are not yet quite extinct.

The actual centre of volcanic activity has to be looked for in a small group of islands known as Santorin, and lying midway between Europe and Asia. These islands consist of marbles and schists, similar to those of the other Cyclades, and they surround a vast crater no less than twelve hundred and eighty feet in depth. The crescent-shaped island of Thera, on the east, presents bold cliffs towards the crater, while its gentle outer slopes are covered with vineyards producing exquisite wine. Therasia, on the west, rises like an immense wall; and the islet of

Aspronisi, between the two, indicates the existence of a submarine partition wall which separates the crater from the open sea. The submarine volcano occupies the centre of this basin. It remains quiescent for long periods, and then suddenly arousing itself, it ejects immense masses of scoriæ. It is nearly twenty-one centuries since the first island rose to the surface in the centre of this basin. This island is known now as Palæa Kaimeni, or the "old volcano." Three years of eruptions in the sixteenth century gave birth to the smallest of the three islands, Mikra Kaimeni. A third cone of lava, Nea Kaimeni, rose in the eighteenth century; and quite recently, between 1866 and 1870, this new island has more than doubled its size, overwhelming the small village of Volkario and its port, and extending to within a very short distance of Mikra Kaimeni. No less than half a million of partial eruptions occurred during those five years, and the ashes were sometimes thrown to a height of four thousand feet. Even from Crete clouds of ashes could be seen suspended in the air, black during the day, and lit up by night.

Thousands of spectators hastened to Santorin from all quarters of the world to witness these eruptions, and amongst them were several men of science—Fouqué, Gorceix, Reiss, Stübel, and Schmidt—whose observations have proved of great service. The crater of Santorin appears to have been produced by a violent explosion which shattered the centre of the ancient island, and covered its slopes with enormous masses of tufa.*

Southern Eubœa and the vicinity of Port Gavrion, on the island of Andros, are inhabited by Albanians, but the population in the remainder of the Archipelago is Greek. The families of Italian or French descent on Seyros, Syra, Naxos, and Santorin are not sufficiently numerous to constitute an element of importance. They claim to be of French descent, and are known in the Archipelago as Franks, and during the war of independence they claimed the protection of the French Government. In former times nearly the whole of the land was held by these Franks, who had taken possession of it during the Middle Ages, and these large estates are made to account for the sparse population of Naxos, which supported a hundred thousand inhabitants formerly, but is now hardly able to support one-seventh that number.

The Cyclades are farther removed from the coast of Greece than Eubœa, and they have not always shared in the historical dramas enacted upon the neighbouring continent. Their position in the centre of the Archipelago naturally caused them to be visited by all the nations navigating the Mediterranean, and their inhabitants were thus subjected to the most diverse influences. In ancient times the mariners of Asia Minor and of Phœnicia called at the Cyclades on their voyages to Greece; during the Middle Ages the Byzantines, the Crusaders, the Venetians, the Genoese, the Knights of Rhodes, and the Osmanli were masters

* Principal altitudes of the islands of Greece:—

	Feet.		Feet.
Mount Delphi, on Eubœa . .	5,730	Mount Oxia, on Naxos . . .	3,290
Mount St. Elias, on Eubœa . .	4,840	Mount St. Elias, on Siphnos . .	2,280
Mount Kokhilas, on Seyros . .	2,565	Mount St. Elias, on Nios . . .	2,410
Mount Kovari, on Andros . .	3,200	Mount St. Elias, on Santorin . .	1,887

there in turn; and in our own days the nations of Western Europe, with the Greeks themselves, hold the preponderance in the Archipelago.

These historical vicissitudes have caused the centre of gravity of the Cyclades to be shifted from island to island. In the time of the ancient Greeks, Delos, the island of Apollo, was looked upon as the "holy land," where merchants congregated from all quarters, carried on business in the shadow of sanctuaries, and held slave markets at the side of the temples. The sale of human flesh became in the end the main feature of the commerce of Delos, and in the time of the Roman emperors as many as ten thousand slaves were bartered away there in a single day. But the markets, the temples, and monuments of Delos have vanished, and its stony soil supports now only a few sheep. During the Middle Ages Naxos enjoyed the predominance; and at present, Tinos, with its venerated church of the Panagia and its thousands of pilgrims, is the "holy land" of the Archipelago; whilst Hermopolis, on Syra, though without trees or water, holds the position of commercial metropolis of the Cyclades. The latter was a town of no importance before the war of independence; but it remained neutral during that struggle, and thus attracted numerous refugees from other islands, and, thanks to its central position, it has since become the principal mart, dockyard, and naval station of the Ægean Sea. Whether travellers proceed to Saloniki, Smyrna, Constantinople, or the Black Sea, they must stop at Hermopolis. The town formerly occupied the heights only, for fear of pirates, but it has descended now to the foot of the hill, and its quays and warehouses extend along the seashore.

Commerce has peopled the naked rocks of Syra, but it has not yet succeeded in developing the resources of the Archipelago as in ancient times. Eubœa is no longer "rich in cattle," as its name implies, and only exports corn, wine, fruit, and the lignite extracted from the mines near Kumi. The gardens of Naxos yield oranges, lemons, and citrons; Scopelos, Andros, and Tinos, the latter one of the best cultivated amongst the islands, export wines, which are excelled, however, by those of Santorin, the Calliste of the earliest Greeks. The volcanic and other islands of the Cyclades export millstones, china clay, lavas, and cimolite, this being used in bleaching. Naxos exports emery, and that is all. The marbles of Paros even remain untouched, and the excellent harbour of that island only rarely sees a vessel. The inhabitants of the Cyclades confine themselves to the cultivation of the soil, and to the breeding of a few silkworms, the surplus population of Tinos, Siphnos, and others emigrating annually to Constantinople, Smyrna, or Greece, to work as labourers, cooks, potters, masons, or sculptors. But whilst some of the islands can boast of a surplus population, there are others which are the abode of a few herdsmen only. Most of the islands between Naxos and Amorgos are hardly more than barren rocks. Antimilos, like Delos, is merely a pasture-ground sown over with rocks. Serphos and Giura are still dreary solitudes, as in the time of the Roman emperors, when they were set aside as places of exile. Serphos, however, possesses iron of excellent quality, and may, in consequence, again become of some importance. On Antiparos there are lead mines.

V.—The Ionian Isles.

The island of Corfu, on the coast of Epirus, and the whole of the Archipelago to the west of continental and peninsular Greece, down to the island of Cythera, which divides the waters of the Ionian Sea from those of the Ægean, have passed through the most singular political vicissitudes in the course of the last century. Corfu, thanks to the protection extended to it by the Venetian Republic, is the only dependency of the Balkan peninsula which successfully resisted the assaults of the Turk. When Venice was handed over to the Austrians by Bonaparte in 1797, Corfu and the Ionian Islands were occupied by the French. A few years afterwards the Russians became the virtual masters in these islands, which they formed into a sort of aristocratic republic under the suzerainty of the Porte. In 1807 the French once more took possession of them; but the English captured one after the other until there remained to them only Corfu, and this, too, had to be given up in 1814. The Ionian Islands were then converted into a "Septinsular Republic," governed by the landed aristocracy, supported by British bayonets. Twice did England alter the constitution of this republic in a democratic sense, but the patriotism of the islanders refused to submit to British suzerainty; and, when Great Britain parted with her conquest, the Ionian Islands annexed themselves to Greece, and they now form the best educated, the wealthiest, and the most industrious portion of that kingdom. England, no doubt, consulted her own interests when she set free her Ionian subjects; but her action is nevertheless deserving of approbation. England exhibited her faith in the axiom that moral influence is superior to brute force, and yielded with perfect good grace, not only the commercial ports of the islands, but likewise the citadel of Corfu, which gave her the command of the Adriatic. This magnanimous policy has not hitherto met with imitators in other countries, but England herself has still many opportunities of applying it in other parts of the world.

Corfu, the ancient Corcyra, has always held the foremost place amongst the Ionian Islands. It owes this position to the vicinity of Italy, and to the commercial advantages derived from an excellent port and a vast roadstead almost resembling an inland lake. The inhabitants are fond of appealing to Thucydides in order to prove that Corfu is the island of the Phæaces of Ulysses. They even pretend to have discovered the rivulet in which beauteous Nausicaa washed the linen of her father, and the shaded walks near the city are known by them as the gardens of Alcinous. Corfu is the only one of the islands which can boast of a small perennial stream, the Messongi, which is navigable for a short distance in barges. The hills, which are placed like a screen in front of the plains of Epirus, are exposed to the full force of the south-westerly winds, which bring much rain; the vegetation, consequently, is rich: orange and lemon trees form fragrant groves around the city, vines and olive-trees hide the barren ground of the hills, and waving fields of corn cover the plains. Corfu, unfortunately, is exposed to the hot sirocco, blowing from the south-east, and this very much curtails its advantages as a winter station for invalids.

The city occupies a triangular peninsula opposite the coast of Epirus, and is the largest, and commercially the most important, of the former republic. It is strongly fortified, and its successive possessors—Venetians, French, Russians, and English—have sought to render it impregnable. A beautiful prospect may be enjoyed from its bastions; but far superior is that from Mount Pantokratoros, the "commandant," for it extends across the Strait of Otranto to Italy. The commercial relations with the latter, as well as the traditions of Venetian

Fig. 25.—Corfu.

dominion, have converted Corfu into a city almost half Italian, and numerous families residing in it belong to both nations, the Greek and the Italian, by descent as well as language. Italian remained the official language of the island until 1830. Maltese porters and gardeners constitute a prominent element amongst the cosmopolitan population of the city.

Corfu formerly owned the town of Butrinto and a few villages on the mainland; but an English governor thought fit to surrender them to the terrible Ali Pasha,

and the only dependencies of Corfu at present are the small islets near it, viz. Othonus (Fano), Salmastraci, and Ericusa, in the north; Paxos, with its caverns, and Antipaxos, the rocks of which exude asphalt, on the south. Paxos is said to produce the best oil in Western Greece.

Leucadia, Cephalonia, Ithaca, Zante, and a few smaller islands, form a crescent-shaped archipelago off the entrance to the Gulf of Patras. They are the summits of a half-submerged chain of calcareous mountains, alternately flooded by the rains or scorched by the sun. Their valleys, like those of Corfu, produce oranges, lemons, currants ("Corinthians"), wine, and oil, which form the objects of a brisk commerce. The inhabitants very much resemble those of Corfu, the Italian element being strongly represented, except on Ithaca.

Leucadia, or the "white island," thus called because of its glittering chalk cliffs, is evidently a dependency of the continent. The ancients looked upon it as

Fig. 26.—The Channel of Santa Maura.
From the French Staff Map.

a peninsula converted into an island by Corinthian colonists, who cut a canal through the isthmus which joined it to the mainland; but this legend is not borne out by an examination of the locality. These Corinthians probably merely dug a navigable channel through the shallow lagoon which separates the island from the coast, and does not exceed eighteen inches in depth. In fact, if there were any tides in the Ionian Sea, the island of Leucadia would be converted twice daily into a peninsula. A bridge, of which there still exist considerable remains, formerly joined the island to the mainland near the southern extremity of the lagoon, whilst an island occupied by the citadel of Santa Maura—a name sometimes applied to the whole of the island—defended its entrance to the north.

Until recently this was the only spot in Western Greece where a grove of date-trees might be seen. A magnificent aqueduct of two hundred and sixty arches, which was also used as a viaduct, joined the citadel to Amaxiki, the chief town and harbour of Leucadia. This monument of Turkish enterprise—it was constructed in the reign of Bajazet—has sustained much injury from earthquakes. Amaxiki might be supposed to be haunted by fever, owing to the salt swamps and lagoons which surround it; but such is not the case: on the contrary, it is a comparatively healthy town, and its women are noted for freshness of complexion and beauty. To the south of it rise the wooded mountains which terminate in the promontory of Leucate (Dukato), opposite to Cephalonia. On the summit of this promontory stood a temple of Apollo, whence, at the annual festival of the god, a condemned criminal was hurled as an expiatory victim. It was celebrated, also, as the lover's leap, whence lovers leaped into the sea to drown their passion.

Cephalonia, or rather Cephallenia, is the largest of the Ionian Islands, and its highest summit—Mount Ænus, or Elato—is the culminating point of the entire Archipelago. Mariners from the centre of the Ionian Sea can see at one and the same time Mount Ætna in Sicily and this mountain of Cephalonia. The forests of conifers, to which the latter is indebted for its Italian name of Montenero, have for the greater part been destroyed by fire, but there still remain a few clumps of magnificent firs. On its summit may be seen the remains of a temple of Jupiter. The island is fertile and populous, but suffers much from want of water. All its rivers dry up in summer, the calcareous soil sucking up the rain, and most of the springs rise from the bottom of the sea, far away from the fields thirsting after water. On the other hand, two considerable streams of sea-water find their way into the bowels of the island.

This curious phenomenon occurs a short distance to the north of Argostoli, a bustling town, having a safe but shallow harbour. The two oceanic rivers are sufficiently powerful to set in motion the huge wheels of two mills, one of which has been regularly at work since 1835, and the other since 1859. Their combined discharge amounts to 35,000,000 gallons daily, and naturalists have not yet decided whether they form a vast subterranean lake, in which beds of salt are constantly being deposited, or whether they find their way through numerous threads, and, by hydrostatic aspiration, into the subterranean rivers of the island, rendering their water brackish. The latter is the opinion of Wiebel, the geologist, and thus much we may assume for certain—that these subterranean waters and caverns are one of the principal causes of the severe earthquakes which visit Cephalonia so frequently. The island of Asteris, between Cephalonia and Ithaca, upon which stood the city of Alalkomenæ, exists no longer, and was probably destroyed by one of those earthquakes.

Ithaca of "divine Ulysses," the modern Theaki, is separated from Cephalonia by the narrow channel of Viscardo, thus named after Robert Guiscard. The island is small, and all the sites referred to in the Odyssey are still pointed out there, from the spring of Arethusa to the acropolis of Ulysses; but the black forests which clothed the slopes of Mount Neritus have disappeared. The inhabitants are

excessively proud of their little island, rendered so famous by the poetry of Homer, and in every family we meet with a Penelope, a Ulysses, and a Telemachus. But the present inhabitants have no claim whatever to be the descendants of the crafty son of Laertes, for during the Middle Ages their ancestors were exterminated by invaders, and in 1504 the deserted fields were given, by the Senate of Venice, to colonists drawn from the mainland. Most of those immigrants came from Epirus, and the dialect spoken by the islanders is much mixed with Albanian words. At

Fig. 27.—Argostoli.
According to Wiebel.

the present time the island is well cultivated, and Vathy, its chief port, carries on a brisk commerce in raisins, currants, oil, and wine. Ithaca, as in the days of Homer, is the "nurse of valiant men." The inhabitants are tall and strong, and Dr. Schliemann is enthusiastic about the high standard of virtue and morality prevailing amongst them. There are neither rich nor poor, but they are great travellers, and natives of Ithaca are met with in every populous city of the East.

"Zante, fior del Levante," say the Italians. And, indeed, this ancient island, Zacynthus, is richer in orchards, fields, and villas than any other of this Archipelago. An extensive plain, bounded by ranges of hills, occupies the centre of this "golden isle"—a vast garden, abounding in vines, yielding currants of superior quality. The inhabitants are industrious, and not content with cultivating their own fields, they assist also in the cultivation of those of Acarnania, receiving wages or a share of the produce in return. The city of Zante, on the eastern coast of the island, facing Elis, is the wealthiest and cleanest town in the Archipelago.

Unfortunately it suffers frequently from earthquakes, to which a volcanic origin is ascribed. Nor is this improbable, for bituminous springs rise near the south-eastern cape of the island, and though worked since the days of Herodotus, they still yield about a hundred barrels of pitch annually. Oil springs discharge themselves close to the shore, and even at the bottom of the sea; and near Cape Skinari, in the north, a kind of rank grease floats on the surface of the waters.

The only islets dependent upon Zante are the Strivali, or the Strophades, to which flew the hideous harpies of ancient mythology.*

VI.—The Present and the Future of Greece.

The Greeks, although they have not altogether fulfilled the expectations of Philhellenes, have nevertheless made great strides in advance since they have thrown off the yoke of the Turks. The deeds of valour performed during the war of independence recalled the days of Marathon and Platæa; but it was wrong to expect that a short time would suffice to raise modern Greece to the intellectual and artistic level of the generation which gave birth to an Aristotle and a Phidias. Nor can we expect that a nation should throw off, in a single generation, the evil habits engendered during an age of servitude, and digest at once the scientific conquests made in the course of twenty centuries. We should likewise bear in mind that the population of Greece is small, and that it is thinly scattered over a barren mountain region. The numerous ports, no doubt, offer great facilities for commerce, nor have their inhabitants failed to avail themselves of them; but there is hardly a country in Europe which offers equal obstacles to a development of its agricultural and industrial resources. The construction of roads, owing to the mountains, meets with difficulties everywhere, whilst the blue sea invites its beholders to distant climes and commercial expeditions. No immigration from the neighbouring Turkish provinces has consequently taken place, whilst many Hellenes, and more especially natives of the Ionian Islands and the Cyclades, annually seek their fortune in Constantinople, Cairo, and even distant India. Men of enterprise leave the country, and there remains behind only a horde of intriguers, who look upon politics as a lucrative business, and an army of government officials, who depend upon the favour of a minister for future promotion. This state of affairs explains the singular fact that the most prosperous Greek communities exist beyond the borders of the kingdom of Greece. These foreign communities are better and more liberally governed than those at home. In spite of the Pasha, who enjoys the right of supervision, the administration of the smallest Greek com-

* Ionian Islands:—

	Area. Sq. m.	Highest Mountains.	Feet.	Inhabitants. (1870.)
Corfu	224	Pantokratoros	3,280	72,450
Paxos and Antipaxos	27			3,600
Leucadia	183	Nomali	3,870	21,000
Cephalonia	292	Elato	5,310	67,500
Ithaca	42	Neriton	2,640	10,000
Zante	162	Skopos	1,300	44,500

munity in Thracia or Macedonia might serve as a pattern to the independent and sovereign kingdom of Greece. Every one there takes an interest in the prosperity of the commonwealth; but in Greece a rapacious bureaucracy takes care only of its own advancement, the electors are bribed, and the expenses thus illegally incurred are recovered by illegal exactions and robbery, such as have prevailed for many years.

The actual population of Greece may amount to 1,500,000 souls; that is to say, it includes about two-fifths of all the Greeks residing in Europe and Asia. The population is less dense than in any other country of Europe, including Turkey. Greece, at the epoch of its greatest prosperity, is said to have supported 6,000,000 or 7,000,000 inhabitants. Attica was ten times more populous at that time, and many islands which now support only a few herdsmen could then boast of populous towns. Sites of ancient cities abound on the barren plateaux, on the banks of the smallest rivulet, and crown every promontory throughout the ancient countries of the Hellenes, from Cyprus to Corfu, and from Thasos to Crete.

The country, however, is being gradually repeopled. Before the war of independence, the population, including the Ionian Islands, amounted, perhaps, to 1,000,000; but battles and massacres diminished it considerably, and in 1832 the number of inhabitants was 950,000 at most. Since that epoch there has been an annual increase varying between 9,000 and 14,000 souls. This increase, however, is spread very unequally over the country. The towns increase rapidly, but several islands, and more especially Andros, Santorin, Hydra, Zante, and Leucadia, lose more inhabitants by emigration than they gain by an excess of births over deaths. The swamp fevers prevailing in continental Greece much retard the increase of population. Naturally the climate is exceedingly salubrious, but the water, in many localities, has been permitted to collect into pestilential swamps, and the draining of these and their cultivation would not only add to the wealth of the country, but would likewise free it from a dire plague.*

Unfortunately agriculture progresses but slowly in Greece, and its produce is not even sufficient to support the population, still less to supply articles for export. And yet the cultivable soil of Greece is admirably suited to the growth of vines, fruits, cotton, tobacco, and madder. Figs and oranges are delicious; the wines of Santorin and the Cyclades are amongst the finest produced in the Mediterranean; the oil of Attica is as superior now as when Athene planted the sacred olive-tree;

* Population of the principal towns of Greece (1870):—

Towns.	Population.	Towns.	Population.
Athens and Piræus	59,000	Argostoli (Cephalonia)	9,500
Patras	26,000	Calamata	9,400
Corfu	24,000	Histiæa, in Eubœa	8,900
Hermopolis, or Syra	21,000	Karystos, in Eubœa	8,800
Zante	20,500	Ægion, or Vostitza	8,800
Lixuri (Cephalonia)	14,000	Nauplia	8,500
Pyrgos, or Letrini	13,600	Spezzia	8,400
Tripolis, or Tripolitza	11,500	Kranidhi, in Argolis	8,400
Chalcis, in Eubœa	11,000	Lamia	8,300
Sparta	10,700	Missolonghi	7,500
Argos	10,600	Andros	9,300

but, excepting a little cotton grown in Phthiotis, and the raisins known as currants or Corinthians, which are exported from the Ionian Islands and Patras to the annual value of about £1,500,000, agriculture contributes but little towards the exports. One of the principal articles is the valonia, a species of acorn picked up in the forests, and used by tanners.

In a country so far behindhand in agriculture manufactures cannot be expected to flourish. All manufactured articles have consequently to be imported from abroad, and especially from England. Greece does not even possess tools to work its famous marble quarries, though they are richer than those of Carrara. There is only one metallurgical establishment in the whole of the kingdom—that of Laurion. The ancients had been working argentiferous lead mines in that part of the country for centuries, and vast masses of unexhausted slag had accumulated near them. This waste is now being scientifically treated in the smelting-works of Ergastiria, and nearly ten thousand tons of lead, and a considerable quantity of silver, are produced there annually. Quite a brisk little town has arisen near the works, and its harbour is one of the busiest in all Greece. But the founders of this flourishing concern had to struggle against jealousies, and the "Laurion question" nearly embroiled the Governments of France and Italy with Greece.*

The Greeks do not support themselves by agriculture, nor can they boast of manufactories, and they would be doomed to starvation if they did not maintain six thousand vessels acting in the lucrative business of ocean carriers throughout the Mediterranean. This Greek mercantile marine is superior to that of Russia, almost equal to that of Austria, and six times larger than that of Belgium, and we should bear in mind that many vessels sailing under Turkish colours are actually owned by Greeks. The ancient instinct of the race comes out strongly in this coast navigation. The large fleets of swift ocean steamers belong to the powerful companies of the West, and the Greeks are content to sail in small vessels suited to the requirements of the coasting trade, which hardly ever extend their voyages beyond the limits of the ancient Greek world. None can compete with them as regards low freight, for every sailor has an interest in the cargo, and all of them are anxious to increase the profits. One may have furnished the wood, another the rigging, a third a portion of the cargo, whilst their fellow-citizens have advanced money for the purchase of merchandise, without requiring any bond except their word of honour. On many of these vessels all are partners, all work alike, and share in the proceeds of the venture.

But, whatever the sobriety and intelligence of these Greek mariners, they cannot escape the fate which has overtaken the small trader and the handicraftsman throughout the world. The cheap vessels of the Greeks may be able to contend for a long time against the steamers of powerful companies, but in the end they must succumb. The country will lose its place amongst the commercial nations of the world unless its agricultural and industrial resources are quickly developed,

* Commerce of Greece (1873):—Mercantile marine: 6,135 vessels of 419,350 tons; entered, 112,814 vessels of 6,336,487 tons; imports, £4,166,239; exports, £2,721,877.

and railways are constructed to convey the products of the interior to the sea-coast. Greece, even now, has only a few carriage roads, not so much because the mountains offer insurmountable obstacles, but because its heedless inhabitants are content with the facilities for transport offered by the sea. It would be impossible in our day to travel from the Pylos to Lacedæmon in a chariot, as was done by Telemachus; for the road connecting these places leads along precipices and over dangerous goat paths. Greece and Servia are the European states which remained longest without a railway, and even now the former is content with a short line connecting Athens with its harbour. It has certainly been proposed to construct several lines of the utmost importance, but, owing to the bankrupt condition of the Greek exchequer, these works have not yet been begun. The public income is not sufficient to meet the expenditure, the debt exceeds £15,000,000, and the interest on the loans remains unpaid.*

The poverty of the majority of the inhabitants of Greece is equal to that of the State. The peasants are impoverished by the payment of tithes, and of a Government impost double or even treble their amount. Though naturally very temperate, they are hardly able to sustain life; they dwell in unwholesome dens, and are frequently unable to put by sufficient means for the purchase of clothing and other necessaries. The young men of the poorest districts of Greece thus find themselves forced to emigrate in large numbers, either for a season or for an indefinite period. Arcadia may be likened in this respect to Auvergne, to Savoy, and to other mountain countries of Central Europe. The Ætolians, however, exchange their fine savage valleys for foreign cities only very reluctantly, though they, too, suffer intensely from the weight of taxation. In ancient times, before their spirit was broken by servitude, they would have resisted the tax-gatherer with arms in their hands. They now content themselves with sallying forth from their villages, in order to pile up a heap of stones by the side of the high-road, as a testimony of the injustice with which they have been treated. This heap of stones is *anathema*. Every peasant passing it religiously adds a stone to this mute monument of execration, and the earth, the common mother of all, is thus charged with the task of vengeance.

Ignorance, the usual attendant of poverty, is great in the rural districts of Greece, and especially in those difficult of access. In Greece, as in Albania and Montenegro, they believe in perfidious nymphs, who secure the affections of young men, and then drag them down below the water; they believe in vampyres, in the evil eye and witchcraft. But the Greeks are an inquiring race, anxious to learn, in spite of their poverty. The peasant of Ithaca will stop a traveller of education on the road, in order that he may read to him the poetry of Homer. Elementary schools have been established in nearly every village, in spite of the poverty of the Government. If no school buildings can be secured, the classes meet in the open air. The scholars, far from playing truant, hardly raise their eyes from the books to notice a passing stranger or the flight of a bird. The scholars in the superior schools and at the University of Athens are equally

* Public income (1875), £1,404,053; expenditure, £1,409,288; debt, £15,232,202.

conscientious and assiduous. It may be that some of them merely aspire to become orators, but they certainly do not resort to a city on the pretence of study, whilst in reality they yield themselves up to debauchery. Amongst the students of the University of Athens there are many who work half the night at some handicraft, others who hire themselves out as servants or coachmen, to enable them to pursue their studies as lawyers or physicians.

This love of study cannot fail to secure to the Greek nation an intellectual influence far greater than could be looked for from the smallness of its numbers. The Greeks of the East, moreover, look upon Athens as their intellectual centre, whither they send their sons in pursuit of knowledge. They found scholarships in connection with the schools of Athens, and largely contribute towards their support. And it is not only the rich Greek merchants of Trieste, Saloniki, Smyrna, Marseilles, and London who are thus mindful of the true interests of their native country, but peasants of Thracia and Macedonia, too, devote their savings to the promotion of public education. The people themselves support their schools and museums, and pay their professors. The Academy of Athens, the Polytechnic School, the University, and the Arsakeion, an excellent ladies' college—these all owe their existence to the zeal of Greek citizens, and not to the Government. It may readily be understood from this how carefully these institutions are being watched by the entire nation, and how salutary must be the influence of young men and women returning to their native provinces after they have been educated at them.

It is thus a common language, common traditions, and a common hope for the future that have made a nation of the Greeks in spite of treaties. Greek patriotism is not confined to the narrow limits laid down by diplomacy. Whether they reside in Greece proper, in European or Asiatic Turkey, the Greeks feel as one people, and they lead a common national life independently of the Governments of Constantinople and Athens. Nay, amongst the Greeks dwelling in foreign lands this feeling of nationality is, perhaps, most intense, for they are not exposed to the corrupting influence of a bureaucracy. They have more carefully guarded the traditions and practices of municipal government, and are practically in the enjoyment of greater individual liberty. The Greek nation, in its entirety, numbers close upon 4,000,000 souls. Its power, already considerable, is growing from day to day, and is sure to exercise a potent influence upon the destinies of Mediterranean Europe.

We are told sometimes that community of religion might induce the Greeks to favour Russian ambition, and to open to that power the road to Constantinople. Nothing can be further from the truth. The Hellenes will never sacrifice their own interests to those of the foreigner. Nor do there exist between Greece and Russia those natural ties which alone give birth to true alliances. Climate, geographical position, history, commerce, and, above all, a common civilisation, attach Greece to that group of European nations known as Greco-Latin. In tripartite Europe the Greeks will never range themselves by the side of the Slav, but will be found amongst the Latin nations of Italy, France, and Spain

16°
18°
20°
22°
24°
26°
28°
30°
46°
44°
42°
HUNGARY
TRANSYLVANIA
MOLDAVIA
WALACHIA
BULGARIA
SERVIA
BOSNIA
HERZEGOVINA
MONTENEGRO
ALBANIA
ROUMELIA
BESSARABIA
Gratz
Stuhlweissenburg
Klausenburg
Yassi
Roman
Galatz
Ibraila
Foksani
Bucharest
Baragan
Kronstadt
Hermannstadt
Arad
Szegedin
Fünfkirchen
Agram
Belgrad
Semlin
Widin
Kraiova
Rustschuk
Silistria
Shumla
Varna
Sofia
Philippopli
Adrianople
Constantinople
Bitolia
Prishtina
Uskup
Mostar
Bosna Serai
Brindisi
Bari
Barletta
Durazzo
Elbassan
Berat
Prisrendi
Ipek
Seres
Rodosto
Sea of Marmara
Black Sea
Adriatic Sea

TURKEY in EUROPE
and
GREECE
By E.G. Ravenstein, F.R.G.S.
Scale 1 : 5000000
100 Statute Miles
Turkey
Greece
Turkey is divided into Sanjaks, Greece into Nomarchias
IONIAN SEA
ASIA MINOR
PELOPONNESE
CRETE (CANDIA)
RHODOS
Taranto
Otranto
Corfu
Zante
Cerigo
Andros
Tenos
Naxos
Milos
Rhodos
Carpathos
Cythera (Cerigo)
Smyrna
Chios
Mytilene
Lemnos
Imbros
Samothrace
Thasos
Scyros
Skiathos
Skopelos
Euboea
Andros
Thira (Santorin)
Gulf of Corinth
Gulf of Salonika
Gulf of Taranto
Gulf of Otranto
Gulf of Smyrna
Gulf of Kos
Gulf of Makri
Gulf of Adramyti
Gulf of Candia
Gulf of Sitia
Gulf of Mirabello
Gulf of Messara
Gulf of Kissamo
Gulf of Canea
Gulf of Suda
Gulf of Rethymnon
Gulf of Kolokythia
Gulf of Argos
Gulf of Nauplia
Gulf of Koron
Gulf of Navarino
Gulf of Arta
Gulf of Volo
Gulf of Enos
Gulf of Saros
Gulf of Xeros
Gulf of Kavalla
Gulf of Orfano
Gulf of Contessa
Gulf of Monemvasia
Gulf of Kolokythia
Gulf of Kissamo
Gulf of Canea
Gulf of Suda
Gulf of Rethymnon
Gulf of Kolokythia
Gulf of Argos
Gulf of Nauplia
Gulf of Koron
Gulf of Navarino
Gulf of Arta
Gulf of Volo
Gulf of Enos
Gulf of Saros
Gulf of Xeros
Gulf of Kavalla
Gulf of Orfano
Gulf of Contessa
Gulf of Monemvasia
40°
38°
36°
34°
18°
20°
22°
Long. E. of Greenw.
24°
26°
28°

VII.—Government and Political Divisions.

The protecting powers have bestowed upon Greece a parliamentary and constitutional Government, modelled upon West European patterns. Theoretically the King of the Greeks reigns, but does not govern, and his ministers are responsible to the Chambers, whose majority changes with the fluctuations of public opinion. In reality, however, the power of the King is limited only by diplomacy. Nor do those Western institutions respond to the traditions and the genius of the Greeks, and although the charter has been modified three times since the declaration of independence, it has never been strictly adhered to.

In accordance with the constitution of 1864, every Greek citizen possessing any property whatever, or exercising a profession, has a right to vote on attaining his twenty-fifth year, and becomes eligible as a deputy at thirty. The deputies, one hundred and eighty-seven in number, are elected for four years, and are paid for their services. The civil list of the King, inclusive of a subvention granted by the protecting powers, amounts to £46,000 a year.

The orthodox Greek Church of Hellas is independent of the Patriarch of Constantinople. It is governed by a Holy Synod, sitting in the capital, and presided over by an archbishop as metropolitan. A royal commissioner is present at the meetings of the Synod, and countersigns every proposition that is carried. Decisions not bearing this official signature are void. The King, on the other hand, is permitted to dethrone or remove a bishop only by consent of the Synod, and in accordance with the canon law. The constitution guarantees religious liberty, but this official Church nevertheless exercises considerable powers, and frequently calls upon the civil authorities to give force to its decrees. The Synod carefully watches over the observance of religious dogmas; it points out to the authorities heretical or heterodox preachers and writers, and demands their suppression; exercises a censorship over books and religious pictures; and calls upon the civil tribunals to punish offenders.

There are no longer any Mohammedans in Greece, except sailors or travellers, and the last Turk has quitted Eubœa. The only Church besides the established one which can boast a considerable number of adherents is the Roman Catholic. It prevails amongst the middle classes on Naxos, and on several others of the Cyclades, and is governed by two archbishops and four bishops.

Greece is divided into thirteen nomes, or nomarchies, and these, again, into fifty-nine eparchies. Each eparchy is subdivided into districts, or dimes (dimarchies), and the latter into parishes, governed by paredres, or assistant dimarchs. These officials are appointed by the King, and are in receipt of small emoluments. The number of officials is proportionately greater in Greece than in any other part of Europe. They form the sixtieth part, or, including their families, the twelfth part of the population, and although their pay is small, they swallow up between them more than half the public income.

The thirteen nomes and fifty-nine eparchies of Greece, with their population in 1870:—

Eparchies.	Population.
Mantinea	46,174
Kynuria	26,733
Gortynia	41,408
Megalopolis	17,425
Arkadia	131,740
Lakedæmon	46,423
Gythion	13,957
Itylos (Œtylos)	26,540
Epidauros Limera	18,931
Lakonia	105,851
Kalamæ	25,029
Messini	29,529
Pylia	20,946
Triphylia	29,041
Olympia	25,872
Messenia	130,417
Nauplia	15,022
Argos	22,138
Korinthia	42,803
Spetsæ and Hermionis	19,919
Hydra and Trizinia	17,301
Kythyra	10,637
Argolis and Korinthia	127,820
Syros	30,643
Kea	8,687
Andros	19,674
Tinos	11,022
Naxos	20,582
Thira (Thera, Santorin)	21,901
Milos	10,784
Kyklades	123,293
Attiki	76,919
Ægina	6,103
Megaris	14,949
Thiva (Thebæ)	20,711
Livadia	18,122
Attiki and Viotia (Bœotia)	136,804

Eparchies.	Population.
Khalkis	29,013
Xerochorion	11,215
Karystia	33,936
Skopelos	8,377
Euvia (Eubœa)	82,541
Phthiotis	26,747
Parnasis	20,368
Lokris	20,187
Doris	49,119
Phthiotis and Phokis	106,421
Mesolongion (Missolonghi)	18,997
Valtos	14,027
Trichonia	14,453
Evrytania	33,018
Navpaktia	22,219
Vonitza and Xeromeros	18,979
Akarnania and Ætolia	121,693
Patras	46,527
Ægialia	12,764
Kalavryta	39,204
Ilia (Elis)	51,006
Achaia and Ilis (Elis)	149,561
Kerkyra (Corfu)	25,729
Mesi	21,754
Oros	24,983
Paxi (Paxos)	3,582
Leucas (Santa Maura)	20,892
Kerkyra (Corfu)	96,940
Kranæa	33,358
Pali	17,377
Sami	16,774
Itaki	9,873
Kephallinia	77,382
Zakynthos (Zante)	44,557

The modern nomenclature has been adopted in the above table.

TURKEY IN EUROPE.

I.—General Aspects.*

THE Balkan peninsula is, perhaps, that amongst the three great peninsulas of Southern Europe which enjoys the greatest natural advantages, and occupies the most favourable geographical position. In its outline it is far less unwieldy than Spain, and even surpasses Italy in variety of contour. Its coasts are washed by four seas; they abound in gulfs, harbours, and peninsulas, and are fringed by numerous islands. Several of its valleys and plains vie in fertility with the banks of the Guadalquivir and the plains of Lombardy. The floras of two climes intermingle on its soil, and add their charms to the landscape. The mountains of Turkey do not yield to those of the two other peninsulas in graceful outline or grandeur, and most of them are still covered with virgin forests. If they are less accessible than the Apennines of Italy or the *sierras* of Spain, that is owing simply to the want of roads; for they are, as a rule, of moderate elevation, and the plateaux from which they rise are narrower and more extensively intersected by valleys than is the table-land of Castile. Both Spain and Italy are closed in the north by mountain barriers difficult to cross, whilst the Balkan peninsula joins the continental trunk by almost imperceptible transitions, and nowhere is it separated from it by well-defined natural boundaries. The Austrian Alps extend without a break into Bosnia, and the Carpathians cross the Danube in order to effect a junction with the system of the Balkan. To the east of the "Iron Gate" there are no mountains at all, and Turkey is bounded there by the broad valley of the Danube.

* Authorities:—R. Pashley, "Travels in Crete;" Raulin, "Description Physique de l'Ile de Crète;" G. Perrot, "L'Ile de Crète;" Viquesnel, "Voyage dans la Turquie d'Europe;" Ami Boué, "La Turquie d'Europe;" A. Dumont, "Le Balkan et l'Adriatique;" Lejean, "Ethnographie de la Turquie d'Europe;" Von Hammer, "Konstantinopel und der Bosporus;" P. de Tchihatchef, "Le Bosphore;" Heuzey, "Voyage archéologique en Macédoine;" Fanshawe Tozer, "Researches in the Highlands of Turkey;" Barth, "Reisen in der europäischen Türkei;" Von Hahn, "Albanesische Studien;" Hecquard, "Histoire et Description de la Haute-Albanie;" Dora d'Istria, "Nationalité albanaise;" F. Maurer, "Reise durch Bosnien," F. de Sainte-Marie, "L'Herzégovine;" Kanitz, "Donau-Bulgarien und der Balkan;" H. Kiepert, Map of Turkey in Europe.

The proximity and parallelism of the coasts of two continents confer upon the Balkan peninsula an advantage unrivalled, perhaps, throughout the world. It is separated from Asia only by the narrow channel which joins the Black Sea to the Ægean Sea: this channel is an ocean highway, and yet forms no serious obstacle to the migration of nations from continent to continent. If the Black Sea were larger than it is at present; if it still formed *one* sea with the Caspian, and extended far into Asia, as it did in a past age, then Constantinople would necessarily become the great centre of the ancient world. That proud position was actually held by it a thousand years ago, and even if it should never recover it, its geographical position alone insures to it an importance for all time to come. If the city were to be razed to day, it would arise again to-morrow at some other spot in the neighbourhood. In the dawn of history powerful Ilion kept watch at the entrance of the Dardanelles: it survives in the city on the Bosphorus; and had there been no Byzantium, its mantle would have descended upon some other town in the same locality.

We know the part played by ancient Greece in the history of human culture. Macedonia and Thracia, the two other countries bordering upon the Ægean, have played their part too. It was those provinces which, after the invasion of the Persians, gave birth to the movement of reaction which led the armies of Alexander to the Euphrates and Indus. The power of the Romans survived there for a thousand years after Rome itself had fallen, and the precious germs of civilisation, which at a later period regenerated Western Europe, were nurtured there. It is true, alas! that the Turk has put a stop to every enterprise of a civilising nature. These conquerors of Turanian race were carried into the Balkan peninsula in the course of a general migration of nations towards the west, which went on for three thousand years, and was attended by perpetual broils. It is now five hundred years since the Turks obtained a footing in the peninsula, and for more than four hundred years they have been its masters, and during that long period the old Roman empire of the East has been severed, as it were, from the rest of Europe. The normal progress of these highly favoured countries has been interrupted by incessant wars between Christians and Mohammedans, by the decay of the nations conquered or enslaved by the Turks, and by the heedless fatalism of the masters of the country. But the time is approaching when that important portion of Europe will resume the position due to it amongst the countries of the earth.

Vast tracts of the Balkan peninsula are hardly better known to us than the wilds of Africa. Kanitz found rivers, hills, and mountains figuring upon our maps which have no existence. Another traveller, Lejean, found that a pretended low pass through the Balkans existed only in the imagination. Russian geodesists engaged upon the measurement of an arc of a meridian found that Sofia, one of the largest and best-known cities of Turkey, had been inserted upon the best maps at a distance of nearly a day's journey from its true position. The entire chain of the Balkans had to be shifted considerably to the south, in consequence of explorations carried on within the last few years. Men of science have hardly ventured yet to explore the plateaux of Albania or Mount Pindus, and much remains yet to

be done before our knowledge of the topography of the Balkan peninsula can be called even moderately complete. The voyages and explorations of a host of travellers * have, however, made known to us its general features and its geological formations. Their task was by no means an easy one, for the mountain masses and mountain chains of the peninsula do not constitute a regular, well-defined system. There is no central range, with spurs running out on both sides, and gradually decreasing in height as they approach the plains. Nor is the centre of the peninsula its most elevated portion, for the culminating summits are dispersed over the country apparently without order. The mountain ranges run in all the directions of the compass, and we can only say, in a general way, that those of Western Turkey run parallel with the Adriatic and Ionian coasts, whilst those in the east meet the coasts of the Black Sea and the Ægean at right angles. The relief of the soil and the water-sheds make it appear almost as if Turkey turned her back upon continental Europe. Its highest mountains, its most extensive table-lands, and its most inaccessible forests lie towards the west and north-west, as if they were intended to cut it off from the shores of the Adriatic and the plains of Hungary, whilst all its rivers, whether they run to the north, east, or south, finally find their way into the Black Sea or the Ægean, whose shores face those of Asia.

This irregularity in the distribution of the mountains has its analogue in the distribution of the various races which inhabit the peninsula. The invaders or peaceful colonists, whether they came across the straits from Asia Minor, or along the valley of the Danube from Scythia, soon found themselves scattered in numerous valleys, or stopped by amphitheatres having no outlet. They failed to find their way in this labyrinth of mountains, and members of the most diverse races settled down in proximity to each other, and frequently came into conflict. The most numerous, the most warlike, or the most industrious races gradually extended their power at the expense of their neighbours; and the latter, defeated in the struggle for existence, have been scattered into innumerable fragments, between which there is no longer any cohesion. Hungary has a homogeneous population, if we compare it with that of Turkey; for in the latter country there are districts where eight or ten different nationalities live side by side within a radius of a few miles.

Time, however, has brought some order into this chaos, and commercial intercourse has done much to assimilate these various races. Speaking broadly, Turkey in Europe may now be said to be divided into four great ethnological zones. The Greeks occupy Crete, the islands of the Archipelago, the shores of the Ægean Sea, and the eastern slopes of Mounts Pindus and Olympus; the Albanians hold the country between the Adriatic and Mount Pindus; the Slavs, including Servians, Croats, Bosnians, Herzegovinians, and Tsernagorans (Montenegrins), occupy the Illyrian Alps, towards the north-west; whilst the slopes of the Balkan, the Despoto Dagh, and the plains of Eastern Turkey belong to the Bulgarians, who, as far as language goes, are Slavs likewise. As to the Turks, the lords of the land,

* We mention Palma, Vaudoncourt, Lapie, Boué, Viquesnel, Lejean, Kanitz, Barth, Hochstetter, and Abdullah Bey.

they are to be met with in most places, and particularly in the large towns and fortresses; but the only portion of the country which they occupy to the exclusion of other races is the north-eastern corner of the peninsula, bounded by the Balkans, the Danube, and the Black Sea.

II.—Crete and the Islands of the Archipelago.

Crete, next to Cyprus, is the largest island inhabited by Greeks. It is a natural dependency of Greece, but treaties made without consulting the wishes of the people have handed it over to the Turks. It is Greek in spite of this, not only because the majority of its inhabitants consider it to be so, but also because of its soil, its climate, and its geographical position. On all sides it is surrounded by deep seas, except towards the north-west where a submarine plateau joins it to Cythera and the Peloponnesus.

There are few countries in the world more favoured by nature. Its climate is mild, though sometimes too dry in summer; its soil fertile in spite of the waters being swallowed up by the limestone rocks; its harbours spacious and well sheltered; and its scenery exhibits both grandeur and quiet beauty. The position of Crete, at the mouth of the Archipelago, between Europe, Asia, and Africa, seems to have destined that island to become the great commercial emporium of that part of the world. Aristotle already observed this, and, if tradition can be trusted, Crete actually held that position for more than three thousand years. During that time it "ruled the waves;" the Cyclades acknowledged the sway of Minos, its king; Cretan colonists established themselves in Sicily; and Cretan vessels found their way to every part of the Mediterranean. But the island unfortunately became divided into innumerable small republics jealous of each other, and was therefore unable to maintain this commercial supremacy in the face of Dorian and other Greeks. At a subsequent period the Romans subjected the island, and it never recovered its independence. Byzantines, Arabs, Venetians, and Turks have held it in turn, and by each of them it has been laid waste and impoverished.

The elongated shape of the island, and the range of mountains which runs through it from one extremity to the other, enable us to understand how it was that at a time when most Greeks looked upon the walls of their cities as synonymous with the limits of their fatherland, Crete became divided into a multitude of small republics, and how every attempt at federation ("syncretism") miserably failed. The inhabitants, in fact, were more effectually separated from each other than if they had inhabited a number of small islands forming an archipelago. Most of the coast valleys are enclosed by high mountains, the only easy access to them being from the sea, and communications between the towns occupying their centres are possible only by crossing difficult mountain paths easily defended. In all Crete there exists but one plain deserving the name, viz. that of Messara, to the south of the central mass of mountains. It is the granary of the island, and the Ieropotamo, or "holy river," which traverses it, has a little water even in the middle of summer.

The contour of Crete corresponds in a remarkable manner with the height of its mountains. Where these are high, the island is broad; where they sink down, it is narrow. In the centre of the island rises Mount Ida (Psiloriti), where Jupiter was educated by the Corybantes, and where his tomb was shown. Its lofty summit, covered with snow almost throughout the year, its gigantic buttresses, and the verdant valleys at its base render it one of the most imposing mountains in the world; but it was still more magnificent in the time of the

Fig. 28.—The Gorge of Hagio Rumeli.

ancient Greeks, when forests covered its slopes, and justified its being called Mount Ida, or "the wooded." On the summit of this mountain the whole island lies spread out beneath our feet; the horizon towards the north, from Mount Taygetus to the shores of Asia, is dotted with islands and peninsulas; and in the south a wide expanse of water extends beyond the barren and inhospitable island of Gaudo.

The Leuca-Ori, or "White Mountains," in the western extremity of the island, are thus called on account of the snow which covers their summits, or because

of their white limestone cliffs. They are exceedingly steep, and perfectly bare, hardly any verdure being met with even in the valleys at their foot. They are known, also, as the Mountains of the Sphakiotes, the descendants of the ancient Dorians, who have retired into their fastnesses, where they are protected by nature against every attack. Some of their villages are accessible only by following the stony bed of mountain torrents leaping down from the heights in small cascades. During the rains the water rushes down these ravines in mighty torrents. The "gates are closed" then, as it is said. One of these gates, or *pharynghi*, is that of Hagio Rumeli, on the southern slope of the Leuca-Ori. When rain threatens it is dangerous to enter these gorges, for the waters rush down and carry everything before them. During the war of independence the Turks vainly endeavoured to force this "gate" of the strong mountain citadel. The level pieces of ground on these heights are sufficiently extensive to support a considerable population, if it were not for the cold. The villages of Askyfo occupy one of these plains, which is surrounded on all sides by an amphitheatre of mountains. In former times this cavity was occupied by a lake. This is proved by ancient beaches and by other evidence. But the waters of the lake found an outlet through some katavothras (*khonos*, "sinks"), and discharged themselves into the sea.

The remaining mountains of the island are less elevated and far less sterile than the White Mountains. The most remarkable amongst them are the Lasithi, and, still farther west, those of Dicte, or Sitia, a sort of pendant to the Mountains of the Sphakiotes. Raised sea-beaches have been traced along their northern slopes, covered with shells of living species, and they prove that that portion of the island has been upheaved more than sixty feet during a recent geological epoch. The northern coast, between the White Mountains and Mount Dicte, offers a greater variety of contour than does the south coast. Its capes, or *acroteria*, project far into the sea, and thence are gulfs, bays, and secure anchorages. For these reasons most commercial cities have been built upon that side of the island, which faces the Archipelago and presents a picture of life, whilst the south coast, facing Africa, is comparatively deserted. All the modern cities on the northern coasts have been built upon the sites of ancient ones. Megalokastron, better known by its Italian name of Candia, is the Heracleum of the ancients, the famous haven of Cnossus. Retimo, on the western front of Mount Ida, is easily identified with the ancient Rithymna; whilst Khanea (Canea), whose white houses are almost confounded with the arid slopes of the White Mountains, represents the Cydonia of the Greeks, famous for its forests of quince-trees. Canea is the actual capital, and although not the most populous, it is nevertheless the most important and the busiest city of the island. It has a second haven to the east, Azizirge, on Suda Bay, one of the best sheltered on the island, and promises to become one of the principal maritime stations on the Mediterranean.*

* Heights of principal mountains:—Aspra Vuna (White Mountain of Leuca-Ori), 8,100 feet; Psiloriti, or Ida, 8,000 feet; Lasithi, or Dicte, 7,100 feet. Towns:—Canea, 12,000 inhabitants; Megalokastron, 12,000; Retimo, 9,000. Total population of the island, 210,000.

Crete has certainly lost much in population and wealth, and the epithet of the "isle of a hundred cities," which it received from the ancient Greeks, no longer applies to it. Miserable villages occupy the sites of the ancient cities, their houses built from the materials of a single ruined wall, whilst immense quarries had to be opened in order to supply the building materials required in former times. The famous "labyrinth" is one of the most considerable of these ancient quarries. Crete, in spite of its great fertility, exports merely a few agricultural products, and nothing now reminds us of the fruitful island upon which Ceres gave birth to Plutus. The peasants are the reputed owners of the land, but they take little heed of its cultivation. Their olives yield only an inferior oil, and though the wine they make is good in spite of them, it is no longer the Malvoisie so highly prized by the Venetians. The cultivation of cotton, tobacco, and of fruit of all sorts is neglected. The only progress in agriculture which can be recorded during the present century consists in the introduction of orange-trees,

Fig. 29.—Crete, or Candia.

Scale 1 : 2 470,000.

The district inhabited by Mohammedans is shaded vertically.

whose delicious fruit is highly appreciated throughout the East. M. Georges Perrot has drawn attention to the singular fact that, with the exception of the olive-trees and the vine, the cultivated trees of the island are confined to particular localities. Thus chestnuts are met with only at the western extremity of the island; vigorous oaks and cypresses are confined to the elevated valleys of the Sphakiotes; the valonia oaks are met with only in the province of Retimo; Mount Dicte alone supports stone-pines and carob-trees; and a promontory in South-eastern Crete, jutting out towards Africa, is surmounted by a grove of date-trees—the finest throughout the Archipelago.

The inhabitants of Crete and the neighbouring islets are still Greek, in spite of successive invasions, and they still speak a Greek dialect, recognised as a corrupted Dorian. The Slavs, who invaded the island during the Middle Ages, have left no trace except the names of a few villages. The Arabs and Venetians, too, have been assimilated by the aboriginal Cretans; but there still exist a considerable

number of Albanians, the descendants of soldiers, who have retained their language and their customs. As to the Mohammedans or pretended Turks, who constitute about one-fifth of the total population, they are, for the most part, the descendants of Cretans who embraced Islamism in order to escape persecution. They are the only Hellenes throughout the East who have embraced, in a body, the religion of their conquerors; but since religious persecution has subsided several of those Mohammedan Greeks have returned to the religion of their ancestors. The Greeks of Crete are thus not only vastly in the majority, but they hold the first place also in industry, commerce, and wealth; it is they who buy up the land, and the Mohammedan gradually retires before them. All Cretans, with the exception of the Albanians, speak Greek, and only in the capital and in a portion of Messara, where the Mohammedans live in compact masses, has the Turkish language made any progress.

We need not be surprised, therefore, if the Greeks lay claim to a country in which their preponderance is so marked. But, in spite of their valour, they were no match against the Turkish and Egyptian armies which were brought against them.

The Cretans are said to resemble their ancestors in the eagerness with which they do business, and in their disregard of truth. They may possibly be "Greeks amongst Greeks—liars amongst liars;" but they certainly cannot be reproached with being bad patriots. On the contrary, they have suffered much for the sake of their fatherland, and during the war of independence their blood was shed in torrents on many a battle-field. The vast cavern of Melidhoni, on the western slope of Mount Ida, was the scene of one of the terrible events of this war. In 1822 more than three hundred Hellenes, most of them women, children, and old men, had sought refuge in this cavern. The Turks lit a fire at its mouth, and the smoke, penetrating to its farthest extremity, suffocated the unfortunate beings who had hoped to find shelter there.

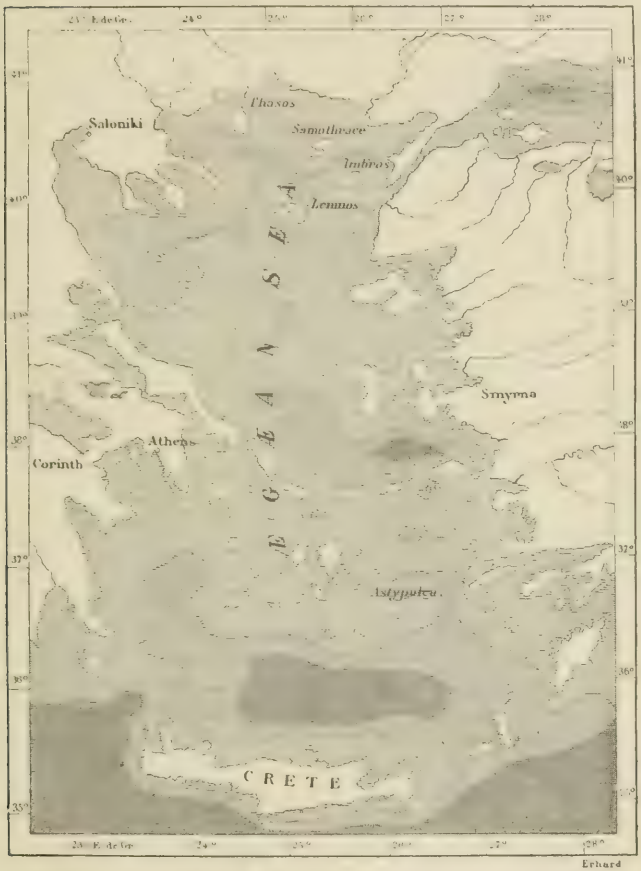
The profound "Sea of Minos," to the north of Crete, separates that island from the Archipelago. All the islands of the latter have been assigned to the kingdom of Greece—Astypalæa, vulgarly called Astropalæa or Stampalia, alone excepted, which still belongs to the Turks. The ancients called this island the "Table of the Gods," although it is only a barren rock. It clearly belongs to the eastern chain of the Cyclades, as far as geological formation and the configuration of the sea-bottom go; but the diplomats allowed its fifteen hundred inhabitants to remain under the dominion of Turkey.

Amongst the other islands inhabited by Greeks, but belonging to Turkey, Thasos is that which lies nearest to the coast of Europe. The strait which separates it from Macedonia is hardly four miles across, and in its centre there is an island (Thasopulo), as well as several sand-banks, which interfere much with navigation. Though a natural dependency of Macedonia, this island is governed by a mudir of the Viceroy of Egypt, to whom the Porte made a present of it. When Mohammed II. put an end to the Byzantine empire, Thasos and the neigh-

bouring islands formed a principality, the property of the Italian family of the Gateluzzi.

Thasos is one of those countries of the ancient world the present condition of

Fig. 30.—The Ægean Sea.
According to Robaquet. Scale, 1 : 5,170,000.



The map is shaded to express the depth of the sea. The palest tint indicates a depth of less than 55 fathoms; the next tint a depth of 55 to 275 fathoms; the next a depth of 275 to 550 fathoms; and the darkest tint a depth of over 550 fathoms.

100 Miles.

which contrasts most unfavourably with former times. Thasos, an ancient Phœnician colony, was once the rival, and subsequently the wealthy and powerful ally, of Athens: its hundred thousand inhabitants worked the gold and iron mines of

the island; they quarried its beautiful white marble; cultivated vineyards yielding a famous wine; and extended their commercial expeditions to every part of the Ægean Sea. But now there are neither mines nor quarries, the vines yield only an inferior product, the agricultural produce hardly suffices for the six thousand inhabitants of the island, and the ancient haven of Thasos is frequented only by the tiniest of vessels. The island has recovered very slowly from the blow inflicted upon it by Mohammed II., who carried nearly the whole of its inhabitants to Constantinople. Thasos after this became a haunt of pirates, and its inhabitants sought shelter within the mountains of the interior. They are Hellenes, but their dialect is very much mixed with Turkish words. Unlike other Hellenes, they are not anxious to improve their minds. They are degenerate Greeks, and they know it. "We are sheep and beasts of burden," they repeatedly told the French traveller, Perrot.

Thasos, however, is the only island of the Archipelago where wooded mountains and verdant landscapes survive. Rains are abundant, and its vegetation luxuriant. Running streams of water murmur in every valley; large trees throw their shade over the hill-sides; the villages near the foot of the mountain are hidden by cypresses, walnut, and olive-trees; the valleys which radiate in all directions from the centre of the island abound in planes, laurels, yoke-elms, and vigorous oaks; and dark pine forests cover the higher slopes of the hills, the glittering barren summits of Mount St. Elias and of other high mountains alone rising above them.

Samothrace, though smaller than Thasos, is much more elevated. Its mountains are composed of granite, schists, limestones, and trachyte, and form a sort of pendant to Mount Athos, on the other side of the Ægean Sea. If we approach Samothrace from the north or the south, it presents the appearance of a huge coffin floating upon the waters; from the east or west its profile resembles a pyramid rising from the waves. From its summit Neptune watched the fight of the Greeks before Troy. In the dark oak forests of the Black Mountains were carried on the mysteries of Cybele and her Corybantes, as well as the Cabiric worship, which was intimately connected with them, and Samothrace was to the ancient Greeks what Mount Athos is to the moderns—a sacred land. Numerous ruins and inscriptions remain to bear witness to the zeal of devout travellers from all parts of the world. But with the downfall of the heathen temples the pilgrims disappeared. There is only one village on the island now. Its inhabitants lead a secluded life, and the only strange faces they see are those of the sponge-fishers who frequent the island during summer. The entire absence of harbours, and the dangerous current which separates Samothrace from Imbro, keep off the mariner, and though the valleys are extremely fertile, they have not hitherto attracted a single immigrant from the neighbouring continent.

Imbro and Lemnos are separated from Samothrace by a deep sea, and appear to continue the range of the Thracian Chersonesus. Imbro, which is nearest to the continent, is the more elevated of the two islands, but its St. Elias does not attain half the height of the mountains of Samothrace. There are no forests

upon the slopes of this mountain, the valleys are covered with stones, and hardly an eighth of the surface of the island is capable of cultivation. Still, the position of Imbro, close to the mouth of the Dardanelles and upon an international ocean highway, will always secure to it a certain degree of importance. The majority of the inhabitants live in a small valley in the north-eastern portion of the island, and though the rivulet which flows through this valley regularly dries up in summer, it is nevertheless called emphatically the Megalos Potamos, or "big river."

Lemnos, or Limni, is the largest island of Thracia, and at the same time the least elevated and the most barren. You may walk for hours there without seeing a tree. Even olive-trees are not met with in the fields, and the village gardens can boast but of few fruit trees. Timber has to be procured from Thasos or the continent. Lemnos, in spite of all this, is exceedingly fertile; it produces barley and other cereals in plenty, and the pastures amongst its hills sustain 40,000 sheep. The island consists of several distinct mountain groups of volcanic origin, 1,200 to 1,500 feet in height, and separated by low plains covered with scoriæ, or by gulfs penetrating far inland. In the time of the ancient Greeks the volcanoes of Lemnos had not yet quenched their fires, for it was in one of them that Vulcan, when hurled from heaven, established his smithy, and, with the assistance of the Cyclops, forged his thunderbolts for Jupiter. About the beginning of our era Mount Mosychlos and the promontory of Chryse were swallowed up by the sea, and the vast shoals which extend from the eastern part of the island in the direction of Imbro probably mark their site. Since the disappearance of Mount Mosychlos, Lemnos has not again suffered from volcanic eruptions or earthquakes. The majority of the inhabitants are Greeks, and the Turks who have settled amongst them are being evicted by the conquered race, which is superior to them in intelligence and industry. Commerce is entirely in the hands of the Greeks. Its principal seat is at Kastro—the ancient Myrhina—which occupies a headland between two roadsteads. Sealed earth is one of the articles exported, and is found in the mountains. In ancient times it was much prized as an astringent, and is so still throughout the East. It is not considered to possess its healing qualities unless it has been collected before sunrise on Corpus Christi day.

The small island of Stratio (Hagios Eustrathios) depends politically and commercially upon Lemnos. It, too, is inhabited by Greeks. As to the islands along the coast of Asia Minor, they form a portion of Turkey in Europe as far as their political administration is concerned, but geographically they belong to Asia.*

* The islands of Thracia:—

	Sq. m.	Inhabitants.	Highest Mountains.	Feet.
Thasos	74	10,000	Mount Ipsario	3,000
Samothrace	66	200	Mount Phengari	5,240
Imbro	85	4,000	Mount St. Elias	1,950
Lemnos	170	22,000	Mount Skopia	1,410

III.—Turkey of the Greeks (Thracia, Macedonia, and Thessaly).

The whole of the Ægean seaboard of European Turkey is occupied by Greeks, and this proves the great influence which the sea has exercised upon the migrations of the Mediterranean nations. Thessaly, Macedonia, Chalcis, and Thrace are more or less Greek countries, and even Constantinople lies within Greece, as defined by ethnological boundaries. The geographical distribution of race there does not, in fact, coincide with the physical features of the country—its mountains, rivers, and climate. The Turkey of the Greeks is, in reality, no geographical unit, and the only tie which unites it are the waters of the Archipelago, which wash all its shores.

Nowhere else does the Balkan peninsula exhibit such varied features as on the shores of the Ægean Sea, and of the adjoining basin of the Sea of Marmara. Bluffs, hills, and mountain masses rise abruptly from the plain; arms of the sea extend far inland; and ramified peninsulas project into the deep waters of the ocean. It appears almost as if nature were making an effort to create an archipelago similar to that in the south.

The tongue of land upon which Constantinople has been built offers a remarkable example of the features which characterize the coast lands of this portion of Europe. Geologically the whole of this peninsula belongs to Asia. Its hollow hills are separated from the granitic mountains of Europe by a wide plain covered with recent formations, and the wall of Anastasius, now in ruins, which was built as a defence to the city, approximately marks the true boundary between Europe and Asia. The rocks on both sides of the Bosphorus belong to the Devonian formation. They contain the same fossils, exhibit the same outward aspects, and date from the same epoch. A patch of volcanic rocks at the northern entrance to the Bosphorus likewise exhibits the same characteristics on both sides of the strait, and there cannot be the least doubt that this European peninsula at a former epoch constituted a portion of Asia Minor, but was severed from it by an irruption of the waters.

Apollo himself, it is said, pointed out the site where to build the city which is now known as Constantinople, and no better could have been found. In fact, the city occupies the most favoured spot on the Bosphorus. It stands on a peninsula of gently undulating hills, bounded by the Sea of Marmara and by the curved inlet called, from its shape, its beauty, and the valuable cargoes floating upon its waters, the "Golden Horn." The swift current of the Bosphorus penetrates into this inlet, and sweeps it clean of all the refuse of the city. It then passes into the open sea at the extreme angle of the peninsula, and sailing vessels are thus able to reach their anchorage without having to struggle against a contrary current. This haven not only affords a secure anchorage to a multitude of vessels, but it likewise abounds in fish; for, in spite of the constant agitation of its waters by the oars of caiques and the paddles or screws of steamers, it is visited annually by shoals of tunnies and other fish. The haven of Constantinople, though easy of access to peaceable merchantmen, can readily be

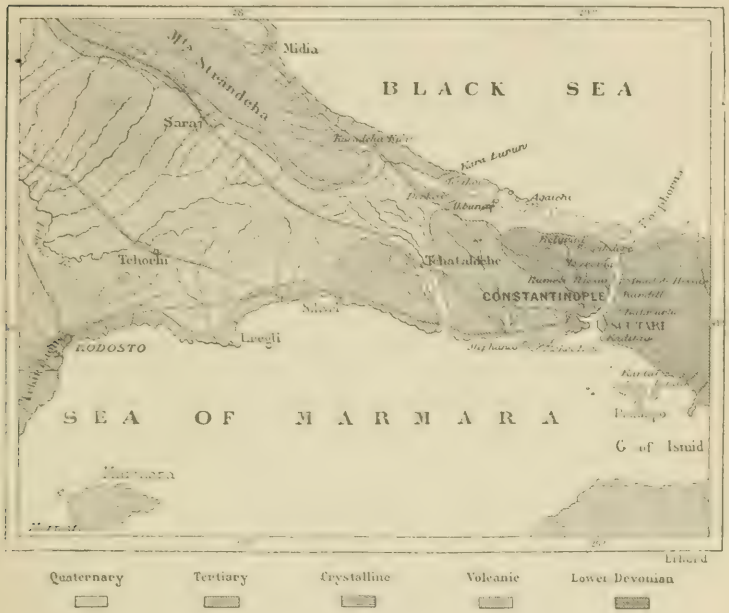
THE CITY OF
CONSTANTINOPLE,
AND
THE THRACIAN BOSPHORUS.
English Miles
EUXINE OR BLACK SEA
Forest of Belgrade
Kila
Domouz dere
Demirdje kem
Fanaraki or
Lighthouse of Roumelia
Kyanch Is or Cyanean Rocks
Eskombri-kem
Yerlikem
Karibtche Fort
Fanaraki or
Lighthouse of Anatolia
Riva
Poiras
Le File Bourmou
Bank leman
Ovid's Tower
Awat bendt
Aqueduct
Aqueduct
Bendt
Belgrade kem
Bendt
Bendt
Baghtche kem
Lokerch kem
Roumeli kavak
Castle
Yeni Malahch
Sari Yar
Bunk dere
Bourgas
The long Aqueduct
Aqueduct or Pacha dérvi
Perendschikem
Anadoli kavak
Anadoli Mountain
BOSPHORUS
ANTIOPE
Kyanch Is or Cyanean Rocks
Cyanean Rocks

PART OF TURKEY IN
PART OF TURKEY IN
CHANNEL OF CONSTANTINOPLE
CONSTANTINOPLE
PROPONTIS OR
SEA OF MARMARA
Therapia
Beikos
Yeni kein
Indjir kein
Kandilia
Roumeli Hissar
Anadoli Hissar
Kandilli
Yam kein
Tschenjel kein
Beyherbey-kein
Istavros
Kourgoundjouk
Yeni mahalleh
Mandra
Cadi kein
Kyat Khana
Kutchuk kein
Balaklu
Bunk salhana
Castle of the 7 Towers
Topchiler kein
Kutchuk Balaklu
Mahlaka
TOPHANA
THE SERAGLIO
Sophia
Gate of Daoud Pasha
Leander's Tower
Dolma Dagh
Dempetrius
Kurn Kesmeh
Armour kein
Kyat Khana
Aqueduct of Bakhawous
Aqueduct of Christman
Dichedin kein
Note
The dotted line thus indicate the courses of Aqueduct which supply the city with water
Proti
Mal tepe
Antigone
Pitta
Chalki
Platti
Ostia
Kyrkipo
Sedar Adari
CONTINUATION OF THE COAST
With the
PRINCES ISLANDS
Longitude East from Greenwich

CONSTANTINOPLE AND THE GOLDEN HORN, FROM THE HEIGHTS OF EYUB.

closed in case of war. The surrounding heights command every approach to it, and a chain has more than once been drawn across the narrow entrance to its roadstead when the city was besieged. The latter, too, can be defended easily, for it is built upon hills, bounded on the land side by an extensive plain. An assailant, to insure success, must dispose not only of an army, but

Fig. 31.—Geological Map of the Peninsula of Constantinople.
According to F. von Hochstetter. Scale 1 : 1,370,000.



also of a powerful navy. In addition to all these natural advantages of its site, Constantinople is in the enjoyment of a climate far superior to that of the cities of the Black Sea, for it is screened by hills from cold northerly winds.

In the dawn of history, when migration and commerce marched only at a slow pace, a site as favoured as that of Byzantium was capable only of attracting the dwellers in its immediate neighbourhood. But after commerce had become developed, the blind alone—so said the oracle of Apollo—could fail to appreciate the great advantages held out by the Golden Horn. Indeed, Constantinople lies not only on the ocean highway which connects the world of the Mediterranean with the Black Sea, but also on the high-road which leads from Asia into Europe. Geographically it may be described as occupying a position at

the mouths of the Danube, Dniester, Dnieper, Don, Rion, and Kizil Irmak, whose common outlet is the Bosphorus. When Constantine the Great constituted it the metropolis of the Roman empire, it grew rapidly in population and wealth; it soon became the city of cities; and its Turkish appellation, Stamboul, is nothing but a corruption of the expression *es tam polin*, used by the inhabitants to denote their going *into the city*. Amongst the distant tribes of Asia it represents Rome. They know it by no other name than that of "Rum," and the country of which it is the capital they call "Rumelia."

Constantinople is one of the most beautiful cities in the world: it is the "paradisiacal city" of Eastern nations. It may compare with Naples or Rio de Janeiro, and many travellers accord it the palm. As we approach the entrance of the Golden Horn, seated in a caique more graceful than the gondolas of Venice, the vast and varied panorama around us changes with every stroke of the oars. Beyond the white walls of the Seraglio and its masses of verdure rise here, amphitheatrically on the seven hills of the peninsula, the houses of Stamboul—its towers, the vast domes of its mosques, with their circlets of smaller domes, and its elegant minarets, with their balconies. On the other side of the haven, which is crossed by bridges of boats, there are more mosques and towers, seen through a forest of masts and rigging, and covering the slope of a hill whose summit is crowned by regularly built houses and the palatial residences of Pera. On the north vast villa-cities extend along both shores of the Bosphorus. Towards the east, on a promontory of Asia, there is still another city, cradled amidst gardens and trees. This is Scutari, the Asiatic suburb of Constantinople, with its pink houses and vast cemetery shaded by beautiful cypress groves. Farther in the distance we perceive Kadi-koei, the ancient Chalcedon, and the small town of Prinkipo, on one of the Princes' Islands, whose yellow rocks and verdant groves are reflected in the blue waters of the Sea of Marmara. The sheet of water connecting these various portions of the huge city is alive with vessels and boats, whose movements impart animation to the magnificent picture. The prospect from the heights above the town is still more magnificent. The coasts of Europe and Asia are beneath our feet, the eye can trace the sinuosities of the Bosphorus, and far away in the distance looms the snow-capped pyramidal summit of Mount Olympus, in Bithynia.

But this enchantment vanishes as soon as we penetrate into the streets of Constantinople. There are many parts of the town with narrow and filthy streets, which a stranger hesitates to enter. It is, perhaps, a blessing, from a sanitary point of view, that conflagrations so frequently lay waste and scour large portions of the city. Scarcely a night passes without the watchman on the tower of the Seraskieriate giving the alarm of fire, and thousands of houses are devoured by that element every year. The city thus renews itself by degrees. It rises from its ashes purified by the flames. But formerly, before the Turks had built their city of stone on the heights of Pera, the quarters destroyed by fire were rebuilt as wretchedly as they were before. It is different now. The use of stone has become more general; wooden structures are being replaced by houses built

of a fossiliferous white limestone, which is quarried at the very gates of the city; and free use is made of the blue and grey marbles of Marmara, and of the flesh-coloured ones of the Gulf of Cyzica, in Asia Minor, in decorating the palaces of the great.

Nearly every vestige of the monuments of ancient Byzantium has been swept away by fires or sieges. There only exists now the precious tripod of bronze, with its three serpents, which the Plataeans had placed in the temple of Delphi in commemoration of their victory over the Persians. The relics of the epoch of the Byzantine emperors are limited to columns, obelisks, arches of aqueducts, the breached walls of the city, the remains of the palace of Justinian, only discovered recently, and the two churches of Santa Sophia, which have been converted into mosques. The grand church of Santa Sophia, close to the Seraglio, is no longer the most magnificent edifice in the universe, as it was in the time of Justinian, for even the neighbouring mosque of Sultan Ahmed far exceeds it in beauty and elegance. It is a clumsy building, supported by buttresses added at various times to keep it from falling. The character of the interior has been changed by the Turks, who have introduced additional pillars, and the once bright mosaics have been covered over; but the dome never fails to strike the beholder: it is a marvel of strength and lightness.

The Seraglio, or Serai, near Garden Point, may boast of fine pavilions and shady walks, but the dark memories of crime will always cling to it. The spot from which sacks containing the bodies of living sultanas or odalisks were hurled into the dark waters of the Bosphorus is still pointed out to the traveller. Far more attractive than this ancient residence of the sultans are the marvellous structures in the Arab or Persian style which line the shores of the Bosphorus, and which impart to the suburbs of Constantinople an aspect of oriental splendour.

The bazaars are amongst the most curious places in the city, not so much because of the rich merchandise which is displayed in them, but because they are frequented by a variety of nations such as cannot be met with in any other city of the world. The capital of the Ottoman empire is a centre of attraction not only to the inhabitants of the Balkan peninsula, but also to those of Anatolia, Syria, Arabia, Egypt, Tunis, and even of the oases. There are "Franks" from every country of Europe, drawn thither by a desire to share in the profits of the ever-increasing commerce of the Bosphorus. This mixture of races is rendered still greater by the surreptitious importation of slaves; for, whatever diplomatists may assert, there can be no doubt that the "honourable guild of slave-dealers" still does an excellent business in negresses, Circassians, and white and black eunuchs. Nor is anything else to be expected amongst a people who look upon a well-stocked harem as a sign of respectability. Dr. Millingen estimates the number of slaves at Constantinople at 30,000 souls, most of whom have been imported from Africa. From an anthropological point of view it is certainly very remarkable that the negro should not have taken root in Constantinople. In the course of the last four centuries a million of negroes at least have been imported, and yet, owing to difficulties of acclimation, ill-usage, and want, they would die out but for fresh importations.

Our statistics do not enable us to classify the 600,000 inhabitants of Constantinople and its suburbs according to race.* One of the principal sources of error in estimates of this kind consists in our confounding Mussulmans with Turks. In the provinces it is generally possible to avoid this error, for Bosnians, Bulgarians, and Albanians recognise each other as members of the same race, whatever religious differences may exist between them. But in the turmoil of a great city this distinction is no longer made, and, in the end, all those who frequent the mosques are lumped together as if they were members of the same race. Of the supposed Osmanli of Constantinople a third, perhaps, consists of Turks, whilst the remaining two-thirds are made up of Arnauts, Bulgarians, Asiatics, and Africans of various races. Amongst the boatmen there are many Lesghians from the Caucasus. The Mohammedans, if not in the minority already, will be so very soon, for they lose ground almost visibly. In old Stamboul, in which a Frank hardly dared to enter some twenty years ago, they still enjoy a numerical preponderance, but in the "agglomeration of cities" known as Constantinople, and extending from Prinkipo to Therapia, they are outnumbered by Greeks, Armenians, and Franks, and certain quarters of the town have been given up to the Christians altogether.

The Greeks are the most influential, and perhaps most numerous, element amongst the rayas. Their head-quarters, like those of the Turks, are at Stamboul, where they occupy a quarter of the town called Phanar, from an old lighthouse. The Greek patriarch and the wealthiest Greek families reside there. These Phanariotes, in former times, almost monopolized the government of the Christian provinces of Turkey, but they fell into disfavour after the Greek war of liberation. The religious influence, too, which they exercised until quite recently, has been destroyed in consequence of the separation of the Servian, Rumanian, and Bulgarian Churches from the orthodox Greek Church—a separation brought about almost entirely through the rapacity of the Greek patriarch and his satellites. If the Greeks would continue to preserve their pre-eminence amongst the races of Constantinople, they must trust, in the future, to their superior intelligence, their commercial habits, education, patriotism, and unanimity. To the Turks the members of the orthodox Church are known as the "Roman nation," and they enjoy a certain amount of self-government, exercised through their bishops, which extends to marriages, schools, hospitals, and a few other matters.

The "nation" of the Armenians is likewise very strong at Constantinople, and, like that of the "Romans," it governs itself through an elective Executive Council. Much of the commerce of Constantinople passes through the hands of Armenians, who, though they came to that city almost simultaneously with the Turks, have down to the present day preserved their peculiar manners. They are cold and reserved, and full of self-respect, differing widely from their rivals in trade, the Jews, who slink furtively to their poor suburb of Balata, at the upper

* Consul Sax (1873) estimates the population as follows:—Stamboul, 210,000; Pera, 130,000; European suburbs, 150,000; Asiatic suburbs, 110,000; total, 600,000 souls, including 200,000 Mohammedans. Dr. Yakshity, on the other hand, estimates the population of Constantinople (exclusive of its Asiatic suburbs) at 358,000 souls, of whom 193,540 are Mohammedans, 144,210 oriental Christians, and 30,000 Franks.

extremity of the Golden Horn. The Armenians are clannish in the extreme, they readily assist each other, and, like the Parsees of Bombay, delight in acts of munificence. But, unlike the Greeks, they are not sustained in their undertakings by an ardent belief in the destinies of their race. Most of them are not even able to speak their native language freely, and prefer to converse in Turkish or Greek.

The Franks are much inferior in number to either of the races named, but their influence is nevertheless far more decisive. It is through them that Constantinople is attached to the civilisation of Western Europe, and their institutions are by degrees getting the better of the fatalism of the East. It is they who built the manufacturing suburbs to the west of Constantinople and near Scutari, and who introduced railways. Every civilised nation of the world is represented amongst them—Italians and French most numerously; and to the Americans is due the credit of having established the first geological museum in Turkey, in connection with Robert College.

Constantinople, owing to the influx of strangers, is steadily increasing in population, and one by one the villages in its vicinity are being swallowed up by the city. The whole of the Golden Horn is surrounded by houses now, and they extend far up the valleys of the Cydaris and Barbyzes, which fall into it. Industrial establishments extend along the shores of the Sea of Marmara, from the ancient fort of the Seven Towers far to the west, and from Chalcedon to the south-east, in the direction of the Gulf of Nicomedia. Both banks of the Bosphorus are lined with villas, palaces, kiosks, cafés, and hotels. This remarkable channel extends for nineteen miles between the shores of Europe and of Asia. Like a huge mountain valley it winds between steep promontories, now contracting and then expanding, until it finally opens out into the vast expanse of the Black Sea. When northern winds hurl the agitated waters of the latter against the sombre cliffs which guard the entrance to the Bosphorus, the contrast between this savage sea and the placid waters of the strait and its charming scenery is striking indeed. At every turn we are arrested by unexpected charms. Rocks, palaces, woods, vessels of every description, and the curious scaffoldings of Bulgarian fishermen succeed each other in infinite variety.

Amongst the innumerable country residences which nestle on the shores of the Bosphorus, those of Balta-Liman, Therapia, and Buyukdere are the best known, for they have been the scenes of historical events; but there is no spot throughout this marine valley which does not excite admiration. These marvels of nature will, before long, have added to them a marvel of human ingenuity. The width of the channel between the castles of Rumili and Anadoli is only 600 yards. It was here Mandrocles of Samos constructed the bridge of boats across which Darius marched his army of 700,000 men when he made war upon the Scythians, and on this identical spot it is proposed now to construct a railway bridge which will join the railways of Europe to those of Asia. A current runs through the Bosphorus, from the Black Sea to the Sea of Marmara, at a rate of from two to six miles an hour; and although several geographers conclude from this that the level

of the former is higher than that of the latter, this must by no means be looked upon as an established fact. We have already noticed the exchange between the waters of the Mediterranean and of the open Atlantic, which takes place through the Strait of Gibraltar. A similar exchange is going on here, and the outflowing surface current is compensated for by an inflowing under-current.

The outlying houses and villas of Constantinople extend northwards along the Bosphorus as far as the two Genoese castles of Rumili-kavak and Anadoli-kavak. This extension coincides with the geological features of the ground, for no sooner have we turned our backs upon the houses than we find ourselves shut in between cliffs of dolerite and porphyry, which extend as far as the Black Sea, where they terminate in the precipices of the Cyaneæ, or Symplegades, the famous rocks which opened and shut, crushing the vessels that ventured to pass through the strait, until Minerva fixed them for ever. These volcanic rocks are barren, but the Devonian strata to the south of them are beautifully wooded. The Turks, unlike the Spaniards and other Southern nations, love and respect nature; plane-trees, cypresses, and pines still shade the shores of the Bosphorus; and the vast forest of Belgrad covers the hills to the east of Constantinople, from which the city draws its supply of water. Birds, too, are better protected than in many a Christian land. The plaintive cooing of doves is heard wherever we turn, flights of swallows and aquatic birds skim over the surface of the Bosphorus, and now and then we encounter a grave stork perched upon the top of a tree or of a minaret.

The whole aspect of the place is southerly, yet the climate of Constantinople has its rigour. The cold winds of the steppes of Russia freely penetrate through the strait, and the thermometer has been known to fall four degrees below zero in the winter. The neighbouring sea renders the climate more equable than it would otherwise be; but as the winds, from whatever direction they blow, meet with no obstacle, sudden changes of temperature are frequent. The average temperature varies very considerably in different years. Sometimes it sinks to the level of that of Pekin or Baltimore, at others it is as high as that of Toulon or of Nice. In exceptional cases the Bosphorus has become covered with ice, but thaws always set in rapidly, and then may be witnessed the magnificent spectacle of masses of ice striking against the walls of the Seraglio, and floating away across the Sea of Marmara. In A.D. 762 these masses of ice were so stupendous that they became wedged in the Dardanelles, and the tepid waters of the Ægean Sea then assumed the aspect of a bay of the Arctic Ocean.

The geological features of the coast region of the Sea of Marmara differ essentially from those of the rest of Turkey. Low ranges of hills rise close to the coast, increasing in height towards the west, until they attain an elevation of 2,930 feet in the Tekir Dagh, or "holy mountains," the grey slopes of which, covered here and there with patches of shrubs or pasturage, are visible from afar.

A narrow neck of land joins the peninsula of Gallipoli—the Thracian

* Length of the Bosphorus, 98,500 feet, or 18·6 miles; average width, 5,250 feet; average depth, 90 feet; greatest depth, 170 feet.

Chersonesus of the ancients—to this coast range. This peninsula is composed of quaternary rocks, which differ in no respect from those met with on the shore of Asia opposite. Anciently a huge fresh-water lake covered a portion of Thracia and more than half the area now occupied by the Ægean Sea. When the land first emerged above the waters, the Chersonesus formed an integral portion of Asia. Subsequently the waters of the Black Sea, which had forced themselves a passage through the Bosphorus, likewise found their way through the Hellespont into the Ægean Sea. The geological formation of the country and the configuration of the sea-bottom prove this to have been the case, and this irruption of the waters was attended, probably, by volcanic eruptions, traces of which still exist on

Fig. 32.—The Hellespont, or Dardanelles, and the Gulf of Saros.
Scale 1 : 1,220,000.

The dark shading expresses a depth exceeding 55 fathoms.

30 Statute Miles.

the islands of the Sea of Marmara and near the mouth of the Maritza, the former to the east, the latter to the west of the peninsula.

If the statements of Pliny and Strabo may be relied upon, the Hellespont must have been much narrower in former times than it is now. At Abydos—the modern Naghara—the width is said to have amounted to seven stadia, or less than a mile, anciently, whilst at the present time it is 6,500 feet. It was here Xerxes constructed his double bridge of boats. The strait is deep at that spot, and its current strong, but no wooden ship could hope to force a passage if covered by the guns in the batteries on both coasts. The Hellespont, like the Bosphorus, has two

currents flowing through it. In winter, when the rivers which flow into the Black Sea are frozen up, and the Sea of Marmara is no longer fed by the waters of the Bosphorus, a highly saline under-current penetrates from the Ægean Sea into the Dardanelles, whilst a feebler current of comparatively fresh water flows in a contrary direction on the surface.*

Gallipoli, the Constantinople of the Hellespont, stands near the western extremity of the Sea of Marmara. It is the first city which the Turks captured upon the soil of Europe; but though they settled down there nearly a hundred years earlier than they did at Constantinople, they are no more in the majority here than they are in the capital. Gallipoli, like Rodosto and other towns on the Sea of Marmara, is inhabited by Mohammedans of various races, by Greeks, Armenians, and Jews, forming separate communities dwelling within the walls of the same town. The country population consists almost exclusively of Greeks, who are the proprietors and cultivators of the land; and in sight of the coasts of Asia, and within that portion of the Balkan peninsula which has been longest under the rule of the Turk, the Greek is stronger numerically than anywhere else to the north of Mount Pindus. He does not there confine himself to the coast, and, if we except a few Bulgarian villages and the larger towns, the whole of Eastern Thracia belongs to him.

The lowlands of this region form a vast triangular plain, bounded by the Tekir Dagh and the coast range on the south, by offshoots from the Rhodope on the west, and by the granitic mountains of Stranja on the east. This is one of the dreariest districts of all Turkey. Swampy depressions and untilled land recall the steppes of Russia; and in summer, when the wind raises clouds of dust, we can imagine ourselves in the midst of a desert. The dreary monotony of this plain is relieved only by the pale contours of distant mountains, and by innumerable artificial mounds of unknown origin. So numerous are these tumuli that they form an essential feature of the landscape, and no artist could convey a just idea of it without introducing into his picture one or more of them.

Near the northern extremity of this unattractive plain, at the confluence of the Maritza and Tunja, lies the city of Adrianople, enveloped in trees, whose sight delights the eye of the weary traveller. Adrianople, in reality, consists of a number of villages, separated from each other by orchards, poplars, and cypresses, above which peep out the minarets of some hundred and fifty mosques. The sparkling waters of the Maritza and Tunja, of rivulets and of aqueducts, lend animation to the picture, and render Adrianople one of the most delightful places. But it is more than this. It is the great centre of population in the interior of Turkey, and its favourable geographical position has always secured to the city a certain amount of importance. The ancient city of Orestis, the capital of the Kings of Thracia, stood on this site, and was succeeded by the Hadrianopolis of the Romans, which the Turks changed into Edirneh, and made their capital until Constantinople fell into their power. The old palace of the Sultan, built in the

* Dimensions of the Dardanelles:—Length, 42·3 miles; average width, 2·7 miles, or 13,100 feet; minimum width, 6,400 feet; average depth, 180 feet; greatest depth, 320 feet.

Persian style towards the close of the fourteenth century, still remains, though in a dilapidated condition. But here, likewise, the Osmanli are in the minority. The Greeks are their equals in numbers, and far surpass them in intelligence, whilst the Bulgarians, too, muster strongly, and, as in other towns of the East, we meet with a strange mixture of races, from Persian merchants down to gipsy musicians. The Jews are proportionately more numerous in Adrianople than in any other town of Turkey, and, strange to relate, they differ from their co-religionists in every other part of the world by a lack of smartness in business transactions. A local proverb says that "it requires *ten* Jews to hold their own against *one* Greek;" and not Greeks alone, for Wallachians, and even Bulgarians, are able to impose upon the poor Israelite at Adrianople.

The communications between Adrianople and Midea, the ancient Greek colony, famous for its subterranean temples, and with other cities on the Black Sea, are difficult. Its natural outlets are towards the south—on the one hand to Rodosto, on the Sea of Marmara; on the other, down the Maritza valley to the Gulf of Saros. The railway follows the latter, and the Rumelian Railway Company has constructed an artificial harbour at Dede Aghach, enabling merchantmen to lie alongside a pier. The allurements of commerce, however, have not hitherto induced the inhabitants of Enos to exchange their walled and turreted acropolis for the marshy tract on the Lower Maritza, with its deadly atmosphere.

The zone occupied by the Greeks grows narrower as we go west of the Maritza, where the Rhodope Mountains form a kind of international barrier. Only the coast is occupied there by Greek mariners and fishermen, whilst the hills in sight of it are held almost exclusively by Turkish and Bulgarian peasants and herdsmen. The marshy littoral districts, the small valleys on the southern slopes of the mountains, and a few isolated hills of volcanic or crystalline formation constitute a narrow band which connects the Greeks of Thracia with their compatriots of Chalcidice and Thessaly. The Yuruks, or "Wanderers," a Turkish tribe which has retained its nomadic habits down to the present day, sometimes even extend their excursions to the sea-coast. Their principal seat is in the Pilav Tepe, a mountain mass to the north-west of Thasos, famous in the time of the Macedonian kings for its mines of gold and silver. A wide plain extends immediately to the west of these mountains, watered by the Strymon, or Karasu, and is of marvellous fertility. Seres, a considerable city, occupies its centre, and hundreds of villages, surrounded by orchards, rice, and cotton fields are scattered over it. Looked at from the heights of the Rhodope, this plain assumes the appearance of a huge garden-city. Unfortunately many parts of it are very insalubrious.

The triple peninsula of Chalcidice has no connection whatever with the Rhodope, and is attached to the mainland by an isthmus covered with lakes, swamps, and alluvial plains. It extends far into the sea like a huge hand spread out upon the waters. Chalcidice is a Greece in miniature, with coasts of fantastic contours, deep bays, bold promontories, and mountains rising in the midst of plains, like islands in an archipelago. One of these mountain masses rises in the trunk of the peninsula, and culminates in Mount Kortach, whilst each of its three

ramifications possesses its own system of scarped hills. Greek in aspect, this curious appendage to the continent is Greek, too, in its population; and, a rare thing in Turkey, all its inhabitants are of the same race, if we except the Turks in the town of Nisvoro and the Slav monks of Mount Athos.

The easternmost of the three tongues of land of Chalcidice, which jut out far into the waters of the Ægean, is almost entirely detached. Only a low and narrow neck of land connects it with the mainland, and it was across this isthmus that Xerxes dug a canal, 3,950 feet in length, either to enable his fleet to avoid the dangerous promontory of Mount Athos, or to give the awe-struck inhabitants a proof of his power. This is the peninsula of Hagion Oros, the Monte Santo of the Italians. At its extremity rises a limestone mountain, one of the most beautiful in the Eastern Mediterranean. This is the famous Mount

Fig. 33.—The Peninsula of Mount Athos.
Scale 1 : 1,020,000.

Athos, which an ancient sculptor proposed to convert into a statue of Alexander, holding a city in one hand and a spring in the other, and which Eastern legends point out as the "exceeding high mountain" to which the devil took Jesus, to show him "all the kingdoms of the world." But whatever old legends may say, the panorama is not as vast as this, though the shores of Chalcidice, Macedonia, and Thracia lie spread out beneath our feet, and the eye can range across the blue waters of the Ægean Sea from Mount Olympus, in Thessaly, to Mount Ida, in Asia Minor. The bold outlines of the fortified monasteries which appear here and there, in the midst of chestnuts, oaks, or pines, on the slope of the mountain, contrast most happily with the faint outline of the coasts on the distant horizon.*

This peninsula, which a traveller has compared to a sphinx crouching upon the bosom of the sea, is the property of a republic of monks, who govern them-

* Altitudes:—Mount Pilav Tepe, 6,183 feet; Kortach, 3,893 feet; Athos, 6,786 feet.

selves according to their own fancy. In return for a tribute, which they pay to the Porte, they alone have the right to live there, and strangers require their permission before they are allowed to enter. A company of Christian soldiers is stationed at the neck of the peninsula to prevent the sacred soil being desecrated by the footsteps of a woman. Even the Turkish governor cannot gain admittance without leaving his harem behind him. For fourteen hundred years, we are told in the chronicles of Mount Athos, no female has set foot upon this sacred soil, and this prohibition extends to animals as well as to human beings. Even the presence of poultry would profane the monasteries, and the eggs eaten by the monks are imported from Lemnos. With the exception of a few purveyors, who reside at the village of Karyes, the 6,000 inhabitants of the peninsula are monks, or their servants, and they live in the monasteries, or in the hermitages attached to the 935 churches and chapels. Nearly all the monks are Greeks, but amongst the twenty large monasteries there are two which were built by the ancient sovereigns of Servia, and one which was founded by Russia. Most of these edifices occupy promontories, and, with their high walls and strong towers, they are exceedingly picturesque. One amongst them, that of Simopetra, appears to be almost inaccessible. It is in these retreats the good fathers of the order of St. Basil spend their lives in contemplative inaction. They are bound to pray eight hours in the day and two in the night, and during the whole of that time they are not allowed to sit. They have, therefore, neither time nor strength for study or manual labour. The books in their libraries are incomprehensible mysteries to them, and, in spite of their sobriety, they might die of starvation if there were not lay-brothers to work for them, and numerous farms on the mainland which are their property. A few shiploads of hazel nuts is all this fertile peninsula produces.

The ancient cities of Olynthus and Potidæa, on the neck of the western peninsula of Chalcidice, have dwindled down into insignificant villages: but the city of Therma, called afterwards Thessalonica, and now known as Saloniki, still exists, for its geographical position is most favourable, and after every siege and every conflagration it again rose from its ashes. Vestiges of every epoch of history may still be seen there: Cyclopean and Hellenic walls, triumphal arches, and remains of Roman temples, Byzantine structures, and Venetian castles. Its harbour is excellent, its roadstead well sheltered: and the high-roads into Upper Macedonia and Epirus lead from it along the valleys of the Vardar and Inje Karasu. These favourable circumstances have not been without their influence, and Saloniki, next to Constantinople and Adrianople, is the most important city of European Turkey. Its population is mixed, like that of other cities in the East, and Jews are exceptionally numerous. Most of them are the descendants of Spanish Jews, expelled by the Inquisition, and they still talk Spanish. Many have outwardly embraced Mohammedanism to escape persecution, but the true Mussulman spurns these converts with disdain. They are generally known as "Mamins."

The commerce of Saloniki is important even now, but greater things are

expected of the future. Like Marseilles, Trieste, and Brindisi, Saloniki aspires to become a connecting link in the trade between England and the East. It actually lies on the most direct road between the Channel and the Suez Canal, and once connected by railways with the rest of Europe, it is sure to take a large share in the world's commerce. This emporium of Macedonia is interesting, too, from an ethnological point of view, for, with the exception of Burgaz, on the Black Sea, it is the only place where the Bulgarians, the most numerous race of European Turkey, have reached the sea-coast. Everywhere else they are cut off from it by alien races, but Saloniki brings them into direct contact with the

Fig. 34.—Mount Olympus.

remainder of Europe. Saloniki, however, not only suffers from bad government, but also from the marshes which surround it, and in summer many of its inhabitants flock to the healthier town of Kalameria, to the west. Miasmatic swamps unfortunately occupy a large portion of the northern coast of the Ægean, and they separate the interior of Macedonia more effectively from the coast than do its mountains. There is hardly any commerce except at Saloniki.

On the western shores of the Gulf of Saloniki, beyond the ever-changing mouths of the Vardar and the briny waters of the Inje Karasu, or Haliacmon, the land gradually rises. Hills are succeeded by mountains, until bold precipices

approach close to the coast, and summit rises beyond summit, up to the triple peak of Mount Olympus. Amongst the many mountains which have borne this name, this is the highest and the most beautiful, and the Greeks placed upon it the court of Jupiter and the residence of the gods. It was in the plains of Thessaly, in the shadow of this famous mountain, that the Greeks lived in the springtide of their history, and their most cherished traditions attach themselves to this beautiful country. The mountains which had sheltered the cradle of their race remained to them for ever afterwards the seat of their protecting deities. But Jupiter, Bacchus, and the other great gods of antiquity have disappeared now, and

Fig. 35.—Mount Olympus and the Valley of Tempe.
According to Heuzey and Kiepert. Scale 1:[illegible].

monasteries have been built in the woods which witnessed the revels of the Bacchantes.

Until recently the upper valleys of Mount Olympus were inhabited only by monks, and by klephtes, or bandits, who sought shelter there from the Arnaut soldiers sent in their pursuit. The mountain, in fact, constitutes a world apart, surrounded on all sides by formidable declivities. Forty-two peaks form the battlements of this mountain citadel, fifty-two springs rise within it, and the bold klepht is secure within its fastnesses from the abhorred Turk. Magnificent forests of laurel-trees, planes, and oaks cover its lower maritime slopes, and in times of trouble they have served as a refuge to entire populations. But Italian

speculators have purchased these forests, and the time is not, perhaps, very distant when Mount Olympus, deprived of its verdure, will be reduced to a barren mass of rock, like most of the mountains of the Archipelago. Wild cats abound on the lower slopes of Olympus, chamois still climb its rugged pinnacles, but bears are no longer met with: St. Denys, who dwelt upon the mountain, required beasts to ride upon, and changed them into horses!

Xenagoras, an ancient geometrician, was the first to measure the height of Mount Olympus, but his result, 6,200 feet, is far from the truth, for the highest summit attains an elevation of 9,750 feet.* It may possibly be the culminating point of the Balkan peninsula. Snow remains in some of its crevices throughout the year, and no human being hitherto appears to have succeeded in ascending its highest pinnacle. According to the Greek legend, even Pelion heaped upon Ossa did not enable the Titans to reach the abode of the gods, and, in reality, the combined height of these two mountains hardly exceeds that of Olympus. But, in spite of this inferior height, "pointed" Ossa and "long-stretched" Pelion, known to us moderns as Kisovo and Zagora, impress the beholder, because of their savage valleys, their precipitous walls of rock, and cliffy promontories.

These mountains continue southward through the hook-shaped peninsula of Magnesia, and terminate opposite the island of Eubœa. They formed a strong bulwark of defence in the time of ancient Greece. The hordes of the barbarians stopped in front of this insurmountable barrier. They were compelled to seek a practicable road to the west of it, through the valley of the Peneus, which is rightly looked upon as the natural frontier of Hellas. Hence the great strategical importance of Pharsalus, in Southern Thessaly, which protects the gorges of the Othrys and the only access to the plains of the Sperchius. The pass of Petra, at the northern extremity of Olympus, was carefully guarded for similar reasons.

A large portion of the area bounded by the crystalline rocks of Olympus and Ossa, and by the cretaceous range of the Pindus, running parallel with the former, consists of plains originally covered by vast lakes. The Gulf of Volo approaches close to the shrunken remains of one of these lakes—that of Karla, or Bœbeis—into which the waters of the swampy plain of Larissa discharge themselves. The dwellers on the shores of this lake say that a dull rumbling noise may now and then be heard at its bottom, which they ascribe to the bellowing of some invisible animal, but which is more probably the gurgling sound of the water penetrating into a sink-hole. Other lake basins are met with at the foot of Olympus towards the west and north-west, and some of the valleys of the upper tributaries of the Peneus are covered with alluvium left behind by the receding waters. Hercules, according to some—Neptune, according to others—drained all these lakes of Thessaly into the Ægean, by opening the narrow gorge between Olympus and Ossa, known to the ancients as the Valley of Tempe. This narrow valley is due, no doubt, to the slow erosive action of water. To the Hellenes it realised their ideals of refreshing coolness and beauty, and once every nine years an embassy arrived from Delphi to pluck the laurel-leaves destined for the victors in the Pythian games. The

* Mount Olympus, 9,750 feet; Mount Ossa, 5,250 feet; Mount Pelion, 5,130 feet.

Valley of Tempe is indeed most beautiful; the transparent and rapid waters of the Peneus, the foliage of the planes, the shrubberies of laurel-roses, and the red-hued cliffs—these combine frequently, and form pictures which delight the senses and impress the mind. But, taken as a whole, this narrow and sombre valley fairly deserves its modern name of Lykostomo, or "wolf's gorge." Even in Thessaly, and, above all, in the Pindus, there are localities more smiling and more beautiful than this famous Valley of Tempe.

The upper valleys of the Peneus, or Salembria, abound in natural curiosities, such as defiles, sinks, and caverns. To the north-west of Mount Olympus, the turbid Titaresius flows through the narrow gorge of Saranta Poros, or of the Four Fords, which was looked upon in former times as one of the gates of hell.

To the west, on the Upper Peneus, are the limestone hills of Khassia, rising to a height of 5,000 feet, and the elevated spurs of Mount Pindus, which have become celebrated through the "works of the gods," or *theoktista*, which surmount them. These "works" consist of isolated towers, crags, and pillars, the most famous amongst them being those on the banks of the Peneus, not far from Trikala. Zealous followers of Simeon the Stylite conceived the idea of building their monasteries on the tops of some of the larger of these natural columns or pedestals. Perched on these heights, and condemned never to leave them, they receive their provisions and visitors in a basket attached to the end of a long rope, and hoisted aloft by means of a windlass. An aërial voyage of no less than 220 feet has to be performed in order to reach in this manner the monastery of Barlaam, and visitors are at liberty to effect this ascent by means of ladders fastened against the rocky precipices. The religious zeal, however, which led monks to select these eyries for their habitations is gradually dying out. Out of twenty monasteries which existed formerly, there remain now but seven, and only one of these, that of Meteora, is inhabited by as many as twenty monks.

Of all the Greek countries which still remain under the dominion of the Turks, there is none which has so frequently sought to regain its independence, none which is claimed by the Hellenes with equal ardour as a portion of their common father-land and the cradle of their race. Thessaly is, in truth, a portion of Greece, as far as the traditions of the past, a common language, and the general aspects of the country can make it so. But it is a more fertile country, its vegetation is more luxuriant, its landscapes are more smiling and delightful. We may not frequently meet with the deep blue sky which calls forth our admiration in Southern Greece, for the vapours rising from the Ægean Sea are attracted by Olympus and other mountains; but this moisture imparts a charm to distant views, and, by protecting the earth against the scorching rays of the sun in summer, it contributes largely towards the fertility of the soil.

The Greek population of Thessaly is strongly mixed with foreign elements, which it has gradually assimilated. Neither Serbs nor Bulgarians remain now in the country, although the Upper Titaresius is known as Vurgari, or "river of the Bulgarians." The Zinzares, or Macedo-Walakhs, who were so numerous in the Middle Ages, now only occupy a few villages. Though proud of their Roman

descent, they gradually become Hellenized. Most of the words by which they designate objects of civilised life are Greek, their priests and schoolmasters preach or teach in Greek, and they themselves speak Greek in addition to their native language. They lose ground, moreover, through an excessive emigration. Even the cultivators of the soil amongst them have not quite given up their nomadic habits, and the roving life of a herdsman or of a pedlar exercises an irresistible attraction upon them. The Turks inhabit in compact masses the lowlands around Larissa, and that town itself is Mussulman to a large extent. The hilly tracts to the north, between the Inje Karasu and the Lakes of Kastoria and Ostrovo, are likewise inhabited by Turks, who differ from the Osmanli of the rest of the empire, and are known as Koniarides. Turks also occupy a portion of Mount Ossa. It is easy to tell from a distance whether a village is inhabited by Turks or by Greeks. M. Mézières has observed that "the Turks plant trees for the sake of shade, the Greeks for the sake of profit." Near the villages of the former we find cypresses and plane-trees, near those of the latter orchards and vineyards. The Koniarides are believed by some authors to have come to Thessaly and Macedonia as colonists in the eleventh century, by invitation of the Eastern emperor. They govern themselves through democratic representative bodies, and are respected by all, because of their probity, their hospitality, and their rustic virtues.

The Greeks are morally inferior to the Turkish peasantry, but they surpass them in intelligence and industry. In the seventeenth century there took place amongst them even a sort of revival similar to the Renaissance of Western Europe, and the love of art was developed sufficiently far to give rise to a school of painters in the villages of Olympus. Faithful to their national traditions and the instincts of their race, the Greeks of Thessaly have sought to organize themselves into self-governing commonwealths. In their free towns, or *kephalokhori*, they are permitted to elect their town councils, establish schools, and appoint what teachers they like. They know how to get the Turkish pasha not to meddle in their local affairs. They pay the taxes demanded by the Turks, as their ancestors paid them to Athens or some other Greek city, but in every other respect they are free citizens governing themselves. The contrast between these independent commonwealths and the *chifliks* of Mussulman proprietors cultivated by Greek farmers is most striking. The land of the free proprietors is, as a rule, far less fertile than that included within these chifliks; yet it produces more, and its cultivators live in comparative ease.

The Greeks of Thessaly bestow much care upon the education of growing generations. Even the most miserable Greek village in the Pindus can boast of a school, which is visited by the young people up to the age of fifteen. As an instance of the commercial spirit of the Thessalians we may mention the Weavers' Co-operative Association, formed in the last century in the town of Ambelakia, delightfully situated amongst orchards and vineyards on the southern slopes of the Valley of Tempe. This powerful association wisely limited its dividends to six per cent., and expended the surplus profits upon an extension of its business. For

many years it enjoyed the greatest prosperity, but the wars of the empire, which closed the markets of Germany against it, brought about its ruin. Co-operation likewise partly accounts for the flourishing cloth manufacture of the twenty-four wealthy Greek villages on the peninsula of Magnesia, to the north of the Gulf of Volo. This district, together with that of Verria, to the north of the Inje Karasu, is probably the most prosperous in all the Greek provinces of Turkey, and it is at least partly indebted for this prosperity to its happy geographical position, being far away from great strategical high-roads.*

IV.—Albania and Epirus.

The name of *Shkiperi*, which the Albanians give to the country they inhabit, is supposed to mean "land of rocks," and no designation could be more appropriate. Stony mountains occupy the whole of the country, from the frontiers of Montenegro to those of Greece. The only plain of any extent is that of Scutari (Shkodra), to the south of the Montenegrin plateau, which forms the natural frontier of Albania towards the north. The bottom of this depression is occupied by the Lake of Scutari; and the Drin, the only river of the Balkan peninsula which is navigable for a considerable distance from the sea, debouches upon it. The Drin is formed by the junction of the White and the Black Drin, and in former times it only discharged a portion of its waters temporarily into the Boyana River, which drains the Lake of Scutari. But in 1858 it opened itself a new channel opposite to the village of Miet, about twenty miles above its mouth, and since that time the greater volume of its waters flows in the direction of Scutari, frequently inundating the lower quarters of that town. The marshy tracts on the Lower Drin are dangerous to cross during the heat of summer, and the fevers of the Boyana are the most dreaded along the whole of that coast.

Most of the southern ramifications of the Bosnian Alps are inhabited by Albanians, but they are separated from their kinsmen in Albania proper by the deep valley of the Drin, a kind of *cañon* similar to those of the Rocky Mountains, enclosed between precipitous walls several thousand feet in height, and hardly ever trodden by the foot of a wanderer. The mountain systems of Bosnia and Albania are only indirectly connected by a series of ranges and plateaux stretching from the mountain of Glieb in a south-easterly direction as far as the Skhar, or Scardus of the ancients. The crest of this latter runs at right angles to most of the ranges of Western Turkey, and although its culminating point is inferior in height to those of Slav Turkey, it is the point of junction between the Balkan and the

* The following are the principal towns of the Greek provinces of Turkey, together with the number of their inhabitants: —

Adrianople (Edirneh)	110,000	Gallipoli (Geliboli)	20,000
Saloniki (Salonica)	80,000	Trikala (Tirhala)	11,000
Seres	30,000	Demotika	10,000
Larissa	25,000	Verria	10,000
Rodosto	20,000	Enos	7,000

mountain systems of Bosnia and Albania. The Skhar is of great importance, too, in the hydrography of Turkey; for two great rivers, the Bulgarian Morava and the Vardar, descend from its flanks, one flowing to the Danube, the other to the Gulf of Saloniki. Chamois and wild goats are still met with in the Skhar, as in the Pindus and Rhodope, and M. Wiet mentions an animal known to the Mirdits as a *lucerbal*, which appears to be a species of leopard.

A mountain region, hardly 3,000 feet in elevation, but exceedingly difficult of access, rises to the west of the Skhar, on the other side of the Black Drin: this is the citadel of Upper Albania, the country of the Mirdits and Dukajins. Enormous masses of serpentine have erupted there through the chalk, the valleys are hemmed in by bold precipices, and the torrents rapidly run down the hollowed-out beds on the exterior slopes. As a rule, the direction of the tortuous ranges of this mountain country is the same as that of the southern spurs of the Skhar. They gradually decrease in height, enclosing fine upland valleys, where the waters are able to accumulate. The Lake of Okhrida, the largest sheet of water in Upper Albania, has not inaptly been likened to the Lake of Geneva. Its waters are bluer even than those of its Swiss rival, and more transparent, and fish may be seen chasing each other at a depth of sixty feet beneath its surface: hence its ancient Greek name of Lychnidos. The delightful little town of Okhrida and Mount Pieria, with its old Roman castle, guard its shores, and the white houses of numerous villages peep out amongst the chestnut forests which cover the slopes of the surrounding hills. This lake is drained towards the north through the narrow valley of the Black Drin. If the statements of the inhabitants may be credited, the waters of the double basin of Lake Presba reach Lake Okhrida through subterranean channels.

The isolated peak of Tomor commands this lake region on the west. To the south of it commences the chain of the Pindus, locally known as Grammos. At first of moderate height, and crossed by numerous mountain roads affording easy communication between Albania and Macedonia, these mountains gradually increase in height as we proceed south, and exactly to the east of Yanina they form the mountain mass of Metzovo, with which the Pindus, properly so called, takes its rise. This mountain mass is inferior in altitude to the peaks of Bosnia or Northern Albania, but it is far more picturesque than either, its slopes being covered with forests of conifers and beech-trees, and the plains extending along its foot having a more southern aspect. Mount Zygos, or Lachmon, which rises in the centre of this mountain mass, does not afford a very extended panorama, but if we climb the craggy peaks of the Peristera-Vuna, or Smolika, near it, we are able to look at the same time upon the waters of the Ægean and Ionian Seas, and even the shore of Greece may be descried beyond the Gulf of Arta.

A famous lake occupies the bottom of the limestone basin at the western foot of the mountain mass of Metzovo. This is the Lake of Yanina, and nowhere else throughout Epirus do we meet with an equal number of natural curiosities as on the shores of this lake. Its depth is inconsiderable, nowhere exceeding forty feet, and it is fed only by numerous springs rising at the foot of the rocks. There is no

visible outlet; but Colonel Leake assures us that each of the two basins into which it is divided is drained by a subterranean channel. The northern lake pours its waters into a sink, or *voirikova*, and reappears towards the south-west as a considerable river, which flows into the Ionian Sea. This is the Thyamis of the ancients, our modern Kalamas. Farther to the south the ancient Acheron bursts from the rocks, and having received the nauseous waters of the equally famous Cocytus, throws itself into the "bay of sweet waters," thus called on account of the large volume of water discharged into it by rivers.

When the waters of the southern and larger basin of Lake Yanina are low, there is but a single effluent, which plunges down into an abyss, and in doing so turns

Fig. [illegible] — Southern Epirus.
According to Kiepert. Scale 1 : 1,[illegible].

[illegible] Miles.

K. Katavothra.

the wheels of a mill. The Cyclopean ruins of the Pelasgic city of Hellas command this huge chasm with its roaring waters. The subterranean river reappears far to the south, and flows into the Gulf of Arta. But when the level of the lake is high, four other sinks swallow up its superabundant waters, and convey them into the main channel, the direction of which is indicated by a few small lakes. The important part played in the mythology of ancient Greece by these subterranean effluents, and particularly by the infernal Acheron and the Cocytus, amply proves the influence exercised by the Pelasgians upon the civilisation of the Hellenes. The myths of the Hellopians became the common property of all Greece, and

there was no temple in all Hellas more venerated than their sanctuary at Dodona, where the future might be foretold by listening to the rustling of the leaves of sacred oaks. This sacred grove existed, probably, near one of the Cyclopean towns so numerous in the country, if not on the shore of the lake itself. Some, erroneously no doubt, have looked for it near the castle inhabited in the beginning of this century by Ali Tepeleni, the terrible Pasha of Epirus, who boasted of being a "lighted torch, devouring man."

The mountains of Suli, to the west of the basin of Yanina, attain an altitude of 3,500 feet, but the neighbouring hills are of moderate height, though abrupt and difficult of access, and near the coast they sink down into small rocky promontories, scantily clothed with shrubs and overrun by jackals. Swamps abound near the shore, and during summer their miasmatic air spreads over the neighbouring villages. To the north of the swamps of Butrinto and of the channel of Corfu, and to the west of the isolated peak of Kundusi, however, the coast rises again, and the austere chain of the Chimæra Mala, or Acroceraunii, extends along it. It was dreaded by the ancients on account of its tempests, and the torrents which poured down its sides. Squalls and changes of wind are frequent near the "Tongue (Linguetta) of Rocks," the most advanced promontory of this coast, at the entrance to the Adriatic Sea. These are the "infamous rocks" referred to by the Roman poet, upon which many a vessel suffered shipwreck. The channel which separates Turkey at that place from Italy has a width of only 45 miles; it is less than 100 fathoms in depth, and at some former period an isthmus may have united the two countries.*

The Shkipetars, or Albanians, are subdivided into two leading tribes or nations, the Tosks and the Gheges, both of whom are no doubt descended from the ancient Pelasgians, but have in many places become mixed with Slavs, Bulgarians, and Rumanians, and perhaps even with other nations; for whilst in some tribes we meet with the purest Hellenic types, there are others the members of which are repulsively ugly. The Gheges are the purest of their race, and they occupy, under various tribal names, the whole of Northern Albania as far as the river Shkumbi. The territory of the Tosks extends from that river southward. The dialects of these two nations differ much, and it is not easy for an Acroceraunian to understand a Mirdit or other Albanian from the north. Gheges and Tosks detest each other. In the Turkish army they are kept separated for fear of their coming to blows, and, when an insurrection has to be suppressed amongst them, the Turkish Government always avails itself of these tribal jealousies, and is certain of being served with the zeal and fury which hatred inspires.

Up to the period of the migration of the barbarians, the whole of Western Turkey, as far as the Danube, was held by Albanians. But they were then pushed back, and Albania was entirely occupied by Servians and Bulgarians.

* Altitudes in Albania:—

	Feet.		Feet.
Skhar	8,200	Kundusi	6,270
Tomor	5,413	Acroceraunian Mountain	6,700
Zygos (Lachmon)	5,500	Lake Okhrida	2,270
Smolika	5,970	Lake of Yanina	1,700

ALBANIANS.

The names of numerous localities throughout the country recall that period of obscuration, during which the name of an indigenous race was not even mentioned by the historian. But when the Osmanli had broken the power of the Serb, the Albanians again raised their heads, and ever since they have kept encroaching upon their Slav neighbours. In the north they have gradually descended into the valley of the Bulgarian Morava, and one of their colonies has even penetrated into independent Servia. Like the waters of a rising ocean, they overwhelm the detached tracts of territory still occupied by Servians. This progress of the Albanians is explained, to a great extent, by the voluntary expatriation of the Servians. Thousands of them, headed by their patriarchs, fled to Hungary, in order to escape the dominion of the Turks, and the Albanians occupied the wastes they left behind. The Servians still hold their ground near Acroceraunia, on the shores of Lake Okhrida, and in the hills looking down upon the fatal plain of Kosovo, where their ancestors were massacred; but they gradually become Albanians in language, religion, and customs. They speak of themselves as Turks, as do the Arnauts, and apply the name of Servian only to the Christians dwelling beyond the frontier. On the other hand, many of the customs of the Gheges agree in a remarkable manner with those of their Slav neighbours, and this proves that there has taken place a thorough blending of the two races.

But whilst the Albanians are gaining ground in the north, they are losing it in the south. A large portion of the inhabitants of Southern Albania, though undoubtedly of Pelasgic origin, are Greek by language. Arta, Yanina, and Prevesa are Hellenized towns, and only a few Mohammedan families there still speak Albanian. Nearly the whole of the tract between the Pindus and the Adriatic coast ranges has become Greek as far as language goes, and throughout the mountain region extending westward to the sea the inhabitants are "bilingual;" that is to say, they speak two languages. The famous Suliotes, for instance, who talk Tosk within the bosom of their family, make use of Greek in their intercourse with strangers. Wherever the two races come into contact, it is always the Albanian who takes the trouble to learn Greek.

This influence of the Hellenes is all the more powerful as it meets with support amongst the Zinzares, known also as Macedo-Walakhs, "Limping" Walakhs, or Southern Rumanians, who are met with throughout the country. These Zinzares are the kinsmen of the Rumanians of Wallachia and Moldavia, and live in a compact body only on the two slopes of the Pindus, to the south and east of the Lake of Yanina. Like the Rumanians of the Danube, they are most probably Latinised Dacians. They resemble the Walakhs in features, character, and disposition, and speak a neo-Latin tongue much mixed with Greek. The Zinzares in the valleys of the Pindus are, for the most part, herdsmen, and wander away from their villages sometimes for months. Others carry on trades, exhibiting much manual skill and intelligence. Nearly all the bricklayers of Turkey, those of the large towns excepted, are Zinzares; and the same individual sometimes erects an entire house, doing in turn the work of architect, carpenter, joiner,

and locksmith. The Rumanians of the Pindus are likewise esteemed as clever goldsmiths.

Their capacity for business is great, and the commerce of the interior of Turkey is almost entirely in their hands, as is that of the maritime districts in those of the Greeks. The Walakhs of Metzovo are said to have stood formerly under the direct protection of the Porte, and every traveller, whether Mussulman or Christian, was bound to unshoe his horses before he left their territory, for fear "of his carrying away a clod of earth which did not belong to him." Commercial houses conducted by Walakhs of the Pindus are met with in every town of the Orient, and even at Vienna one of the most influential banks has been founded by one of them. Abroad they are generally taken for Greeks, and the wealthier amongst them send their children to Athens to be educated. Surrounded by Mussulmans, the Zinzares of the Pindus feel the necessity of attaching themselves to some country through which they might obtain their freedom, and they hope for a union with Greece. It is only quite recently that they have learnt to look upon the Rumanians of the North and the Italians as their kinsmen. They do not, however, set much store upon their nationality, and have no aspirations as a distinct race. There can be no doubt that in the course of ages many of these Macedo-Walakhs have become Hellenized. Nearly all Thessaly was inhabited by Zinzares in the Middle Ages, and Byzantine authors speak of that country as "Great Wallachia." Whether these Zinzares have emigrated to Rumania, as some think, or have become assimilated with the Greeks, the fact remains that at the present day they are not very numerous on the eastern slopes of the Pindus. Thousands of Rumanian families have settled in the coast towns, at Avlona, Berat, and Tirana, embracing Mohammedanism, but still retaining their native idiom.

If we exclude these Zinzares, the Greeks of Epirus, the Servians, and the few Osmanli dwelling in the large towns, there remain only the semi-barbarous Gheges and Tosks, whose social condition has hardly undergone any change in the course of three thousand years. In their manners and modes of thought these modern Albanians are the true successors of the ancient Pelasgians, and many a scene that a traveller may witness amongst them carries him back to the days of the Odyssey. G. von Hahn, who has most thoroughly studied the Shkipetars, looks upon them as veritable Dorians, whose ancestors, led by the Heraclidæ, burst forth from the forests of Epirus to conquer the Peloponnesus. They are as courageous, as warlike, as fond of dominion, and as clannish as were their ancestors. Their dress, likewise, is nearly the same, and the white tunic (*fustanelle*) neatly fastened round the waist fairly represents the ancient *chlamys*. The Gheges, like the Dorians of old, are addicted to that mysterious passion which the historians of antiquity have confounded, unfortunately, with a nameless vice, and which links men to children by a pure and ideal love, in which the senses have no part.

There is no modern people respecting whom more astounding acts of bravery are recorded than of the Albanians. In the fifteenth century they had their Scanderbeg, who, though the theatre of his glory was more circumscribed than that of his namesake of Macedonia, was hardly inferior to him in genius, and

certainly surpassed him in justness and goodness of heart. Or what nation has ever exceeded in courage the Suliote mountaineers, amongst whom not an aged man, a woman, or a child was found to beg for mercy from Ali Pasha's executioners? The heroism of these Suliote women, who set fire to the ammunition waggons, and then hand in hand precipitated themselves from the rocks, or sought death in the mountain torrents, chanting their own funeral song, will at all times stand forth in history as an astounding fact.

This valour, unfortunately, is associated amongst many tribes with a fearful amount of savageness. Human life is held cheap amongst these warlike populations; blood calls for blood, and victim for victim. They believe in vampires and phantoms, and occasionally an old man has been burnt alive, on suspicion of his being able to kill by the breath of his mouth. Slavery does not exist, but woman is held in a state of servitude; she is looked upon as an inferior being, having no rights or mind of her own. Custom raises a more formidable barrier between the sexes than do walls and locked doors elsewhere. A young girl is not permitted to speak to a young man; such an act is looked upon as a crime, which her father or brother may feel called upon to punish by a deed of blood. The parents sometimes consult the wishes of their son when about to marry him, but never those of their daughter. The latter is frequently affianced in her cradle, and, when twelve years of age, she is handed over to a young man on his presenting a wedding outfit and a sum of money fixed by custom, and averaging twenty shillings. From that moment he becomes the absolute master of his bride, though not without first going through the farce of an abduction, as is customary amongst nearly all ancient nations. The poor woman, thus sold like a slave, is bound to work for her husband. She is his housekeeper as well as his labourer, and the national poets compare her to the "ever-active shuttle," whilst the father of the family is likened to the "majestic ram marching at the head of the flock." Yet woman, scorned though she be, and brutalised by heavy work, may traverse the whole country without fear of being insulted, and the life of an unfortunate who places himself under her protection is held sacred.

Family ties are very powerful amongst the Albanians. The father retains the rights of sovereign lord up to an advanced age, and as long as he lives the earnings of his children and grandchildren are his own. Frequently this communism continues after his death, the eldest son taking his place. The loss of a member of the family, and particularly of a young man, gives rise to fearful lamentations amongst the women, who frequently swoon away, and even lose their senses. But the death of persons who have reached the natural limits of human life is hardly mourned at all. The descendants of the same ancestor never lose sight of their parentage. They form clans, called *phis* or *pharus*, which are bound firmly together for purposes of defence or attack, or in the pursuit of their common interests. Brotherhood by election is known amongst the Albanians, as well as amongst the Servians and other ancient nations, and its ties are as strong as those of blood. Young men desirous of becoming brothers bind themselves by solemn vows in the presence of their families, and, having opened a vein, they

drink each other's blood. The need of these family bonds is felt so strongly in Albania, that young people brought up together frequently remain united during the remainder of their lives, forming a regular community, having its days of meetings, its festivals, and a common purse.

But in spite of these family associations and clans, in spite of the enthusiastic love which the Albanian bears his native land, there exists no political cohesion amongst the various tribes. The physical conditions of the country, no less than an unhappy passion for war, have scattered their forces, and rendered them unable, consequently, to maintain their independence. The religious animosities between Mussulman and Christian, Greek and Roman Catholic, have contributed to the like result.

It is generally supposed that the majority of the Albanians are Mohammedans. When the Turks became masters of the country the most valiant amongst them fled to Italy, and the greater part of the tribes that remained behind were compelled to embrace Islamism. Many of the chiefs, moreover, turned Mussulmans, in order that they might continue their life of brigandage, on pretence of carrying on a holy war. This accounts for the fact of the aristocracy of the country being for the most part Mohammedan, and in possession of the land. The Christian peasant who tills it is nominally a free man, but in reality he is at the mercy of his lord, who keeps him at the point of starvation. These Albanian Mussulmans, however, are fanatic warriors rather than religious zealots, and many of their ceremonies, particularly those connected with their native land, differ in nothing from those of their Christian compatriots. They have been converted, but not convinced, and cynically they say of themselves that their "sword is wherever their faith is."

In many districts the conversion has been nominal only, and zealous Christians have continued to conduct their worship in secret. Many Mohammedans of this class returned to the faith of their fathers as soon as the tolerance of Government permitted them to do so. As to the warlike mountain clans, the Mirdits, Suliotes, and Acroceraunians, they had no need to bend to the will of the Turks, and remained Greek or Roman Christians. The boundary between Gheges and Tosks coincides approximately with the boundary between these two denominations, the Roman Catholics living to the north of the Shkumbi, the orthodox Greeks to the south of the river. The Hellenes and Zinzares in Southern Albania are orthodox Greeks. The hatred between these two denominations of Christians is intense, and this is the principal reason why the Albanians have not succeeded in regaining their independence, as have the Servians.

Southern Albania and Epirus had feudal institutions up to the close of last century. The chiefs of the clans and the semi-independent Turkish pashas lived in strong castles perched upon the rocks, from which they descended from time to time, followed by bands of servitors. War existed in permanence, and property changed hands continuously, according to the fortunes of the sword. Ali the Terrible, of Yanina, put a stop to this state of affairs. He reduced high and low to the same level of servitude, and the central Government now wields the power formerly exercised by lords and heads of families.

If we would become acquainted with a social condition recalling the Middle Ages, we must go amongst the independent tribes of Northern Albania. On crossing the Matis we at once perceive a change. Every one goes armed: shepherds and labourers carry a carbine on the shoulder; and even women and children place a pistol in their belts. Families, clans, and tribes have a military organization, and at a moment's notice are ready to take the field. A sheep missing in a flock, an insult offered in the heat of passion, may lead to war. Not long since the Montenegrin was the most frequent disturber of the peace, for, shut up in his sterile mountains, he was often obliged to turn brigand in order to sustain life, and laid under contribution the fields of his neighbours. The Turks have at all times nourished this hatred between Albanians and Montenegrins. They recompense the warlike services of the tribes of the border clans by exempting them from taxation, and allowing them to govern themselves according to their own laws. Let these immunities be touched, and they will make common cause with their hereditary foes of the Black Mountains.

The Mirdits are typical of the independent tribes of Northern Albania. They inhabit the high valleys to the south of the gorge of the Drin, and, though hardly numbering 12,000 souls, they exercise, in consequence of their warlike valour, a most important influence in all Western Turkey. Their country is accessible only through three difficult defiles, and they hold command of the roads which the Turkish troops must follow when operating against the Montenegrins. The Sublime Porte, well aware how difficult it would be to subdue these redoubtable mountaineers, has endeavoured to attach them, showering honours upon them, and granting them the most complete self-government. The Mirdits, on their side, though Christians, have at all times fought most valiantly in the ranks of the Turkish army, in Greece and the Morea, as well as against their fellow-Christians of Montenegro. They are formed into three "banners" of the mountains and two of the plains, and in time of war are joined by the five banners of Lesh, or Alessio. The banner of the renowned clan of Orosh takes precedence of all others.

The country of the Mirdits is governed by an oligarchy, of which the Prince or Pasha of Orosh is the hereditary head. His power, however, is merely nominal, for in reality the country is governed by a council consisting of the elders (*vecchiardi*) of the villages, the delegates of the banners, and the heads of clans. The proceedings of this council are regulated by ancient traditions. Wives are taken by force from the enemy, for the members of the five banners look upon each other as relatives, and the Mohammedan girls in the lowland villages look forward with little fear to their being carried off by Mirdit warriors. The *vendetta* is exercised in an inexorable manner, and blood cries for blood. A violation of hospitality is punished with death. The adulteress is buried beneath a heap of stones, and her nearest relative is bound to deliver the head of her accomplice to the injured husband. It need hardly be said that education is at a very low ebb amongst these savages. There are no schools, and in 1860 hardly fifty Christians of the Mirdit country and of the district of Lesh were able to

read. Agriculture, nevertheless, is in a relatively advanced state. The valleys of the sterile mountains are cultivated with a certain amount of care, and they produce finer crops than do the fertile plains, inhabited by an indolent population.

By a strange contrast, these direct descendants of the ancient Pelasgians, to whom we are indebted for the beginning of civilisation in Europe, still number amongst the most savage populations of our continent. But they, too, must yield in time to the influence of their surroundings. Until recently the Epirotes and southern Shkipetars left their country only in order to lead the easy but degrading life of mercenaries. In the last century the young men of Acroceraunia sold themselves to the King of Naples, to be embodied in his regiment of "Royal Macedonians;" and even in our own days not only Mohammedans, but also Christian Tosks, enter the service of pashas and beys. These men, known as Arnauts, may be met with in the most remote parts of the empire—in Armenia, at Bagdad, and in Arabia. On the expiration of their term of service, the majority of these veterans retire to estates granted them by Government, and this accounts for the large number of Arnaut villages met with in all parts of the empire.

But wars are less frequent now, the life of a mercenary offers fewer advantages, and increasing numbers of Albanians leave their country annually in order to gain a living abroad by honest labour. Like the Swiss of the canton of Grisons, many Shkipetars descend from their mountains at the commencement of winter in order to work for wages in the plains. Most of these return to their mountain homes in spring, enriched by their earnings; but there are others who remain abroad for years, or who never return. The advantages of a division of labour appear to be well understood by these mountaineers of Epirus and Southern Albania, and each mountain valley is noted for the exercise of some special craft. One valley sends forth butchers, another bakers, a third gardeners. A village near Argyrokastro supplies Constantinople with most of its well-sinkers. The district of Zagori, perhaps the home of the ancient Asclepiads, sends its doctors, or rather "bone-setters," into every town of Turkey. Many of these emigrants, when they become wealthy, return to their native land, where they build themselves fine houses in the midst of sterile mountains, and these take the places of the old seigneurial towers, which were erected only for purposes of defence.

The Albanians are thus being carried along by a general movement of progress, and if once they enter into the common life of Europe, we may expect them to play a prominent part, for they possess a penetrating mind and much strength of character. The Albanians enjoy the advantage of having ready access to the sea, but hitherto they have derived only small benefit from it, not only owing to the disturbed state of the country and the absence of roads, but also because of the alluvial deposits formed by the rivers and the malaria of the marshes. Still, making every allowance for these disadvantages, they hardly account for the almost entire absence of maritime enterprise. One would scarcely fancy these Epirotes and Gheges to be of the same race as those Hydriote corsairs who launched whole fleets upon the waters of the Archipelago at the time of the war for Hellenic independence, and who still maintain the foremost place amongst the mariners of

WEALTHY ARNAUTS.

Greece. The ports of Albania—Antivari, Porto Medua (one of the safest on the Adriatic), Durazzo, Avlona, Parga (lost in a forest of citron-trees), and even strong Prevesa, surrounded by more than a hundred thousand olive-trees—can boast but of a trifling commerce, and two-thirds of that are carried on in Austrian vessels from Trieste. With the exception of the Acroceraunians and the inhabitants of Dulcigno, which is the port of Scutari, no Mohammedan Albanian ventures upon the sea, not even as a fisherman. In spite of the fertility of the soil, there are hardly any articles to export. The mines of the country are unexplored, agriculture is in a most backward state, and in Epirus hardly any industry is known except the rearing of sheep and goats.

At the time of the Romans these countries were equally forsaken. There was one magnificent city, Nicopolis, built by Augustus on a promontory to the north of the modern Prevesa to commemorate his victory at Actium. The only other town of importance was Dyrrhachium, called Durazzo by the Italians. It formed the terminus of the Via Egnatia, which traversed the whole of the Balkan peninsula from west to east, and constituted the great highway between Italy and the Orient. Avlona may aspire one day to take the place of ancient Dyrrhachium. Its geographical position is superior to that of Durazzo, for it is nearer to Italy, and its deep and secure harbour enjoys the shelter of the island of Suseno and of the Linguetta of Acroceraunia.

In the meantime all the commerce of the country is concentrated in Scutari and Yanina, and in some other towns of the interior. The most considerable amongst the latter are Prisrend, at the foot of the Skhar, whose nobles boast of their magnificent dresses and fine weapons; Ipek (Pech), Prishtina, Jakovitza (Yakova), in the north-eastern portion of the country, and on roads which lead from Macedonia into Bosnia. Nearer the coast are Tirana, Berat, and Elbasan, the ancient Albanon, whose name recalls that of the entire country. Gyorcha (Koritza), to the south of the Lake of Okhrida, is likewise a place of much trade, thanks to its position on a road joining the Adriatic to the Ægean Sea. Scutari and Yanina occupy sites at the foot of the mountains, whose natural advantages could not fail to attract a numerous population. Yanina, the capital of Epirus, is the more picturesque of these two cities. It is situated on the shore of a fine lake, opposite the somewhat heavy masses of the Pindus, but in sight of the mountains of Greece, which are of a "luminous grey, glittering like a tissue of silk." At the time of Ali Pasha, Yanina became the capital of an empire, and its population then exceeded that of Scutari. But the latter has now regained its pre-eminence. It is admirably situated, and the roads from the Danube and the Ægean, from the Lower Drin and the Adriatic, converge upon it. Scutari, or Shkodra, is the first oriental city which a traveller coming from Italy meets with, and the first impression made by its numerous gardens enclosed by high walls, its deserted streets and irregular buildings, is sufficiently curious. Long after he has entered the town, the traveller will remain uncertain as to its whereabouts. But let him climb to the summit of the limestone rock surmounted by the old Venetian castle of Rosapha, and the most magnificent panorama will

unfold itself before his eyes. The domes of Scutari, its twenty minarets, the emerald verdure of the plain, the surrounding amphitheatre of fantastically shaped mountains, the winding waters of the Boyana and Drin, and the placid surface of the lake glittering in the sun—these all combine to produce a spectacle of rare magnificence. The sea alone is wanting to render this picture perfect, but, though near, it is not within sight.*

V.—The Illyrian Alps, Bosnia, and Herzegovina.

Bosnia, in the north-western corner of Turkey, is the Switzerland of the European Orient, but it is a Switzerland whose mountains do not reach the zone of perennial snow and ice. In many respects the mountain ranges of Bosnia, and of its southern province, the Herzegovina, resemble those of the Jura. They, too, are composed principally of limestone, and rise in parallel ridges, surmounted here and there by sharp crests. Like the successive ridges of the Jura, they are of unequal height, and, taken as a whole, assume the appearance of a plateau traversed by parallel furrows, and gently sloping in one direction. The most elevated chain of Northern Bosnia is that which separates it from the coast of Dalmatia, and the less elevated ridges running parallel with it gradually decrease in height towards the north-east, in the direction of the plains of the Save.

Rocks not belonging to the Jurassic system, such as crystalline slates, dolomites, tertiary deposits, and serpentine, are met with in various localities, and impart some variety to the orographical features of Bosnia. Several crater-shaped depressions in the east and south-east separate the mountains of Bosnia from the mountain masses of Servia. The most remarkable amongst these plains is that of Novibazar, into which numerous torrents discharge themselves, and which commands roads diverging in various directions. This is the strategical key of the country, and is destined on this account to become an important railway junction.

Nearly all the mountain ranges which pass from Carniola and Austrian Croatia into Bosnia increase in height as we advance towards the centre of the peninsula. The bleached pyramid of the Durmitor, close to the northern frontier of Montenegro, attains an elevation of nearly 8,000 feet, and the plateau surrounding it is cut up by deep cavities, some of which, like the troughs of the Herzegovina, open out in one direction, whilst others are completely shut in by declivities. The Prokletya, or "cursed" mountain, still farther to the south-east, rises to a height even more considerable, and constitutes one of the most formidable mountain masses of all Turkey. A huge depression occupies its centre, the bottom of which is covered by the Lake of Plava. Even in summer patches of snow may be seen on some of the mountains which surround this abyss. But Mount Kom, the

* Population of the principal cities of Albania:—Prisrend, 35,000; Scutari (Shkodra), 35,000; Yanina, 25,000; Jakovitza (Yakova), 17,000; Ipek (Pech), 16,000; Elbasan, 12,000; Berat, 11,000; Prishtina, 11,000; Tirana, 10,000; Koritza, 10,000; Argyrokastro, 8,000; Prevesa, 7,000: Dulcigno, 7,000; Durazzo, 5,000.

TURKISH MULETEERS IN THE HERZEGOVINA.

highest of all, never retains its cap of snow during the whole of the year, for it melts away before the hot African winds to which it is exposed. Mount Kom may possibly turn out to be the culminating point of the Balkan peninsula. It is certainly one of the highest summits, and its double peak, rising above the plateau of Montenegro, is descried from afar by the mariner navigating the Adriatic. It has been ascended by several travellers, for its slopes are gentle.*

The rivers of Bosnia, like those of the Jura, flow between parallel mountain ranges towards the north-east, along the furrows traced out for them by nature. But these calcareous mountain ramparts of Bosnia, like those of the Jura, are broken up by narrow gorges, or *cluses*, through which the pent up waters find a way from furrow to furrow. Instead of taking a serpentine course, as do most rivers flowing through a plain, these rivers of Bosnia change from valley to valley by abrupt bends. Gentle and furious in turns, they gradually reach the lower regions, and are finally swallowed up by the Save. Only one river, the Narenta, finds its way into the Adriatic; all others, in accordance with the general slope of the country, flow in the direction of the Danube. These river valleys, with their sudden turnings, would be available as natural roads for reaching the plateau, if most of the gorges were not exceedingly difficult of access; and until regular roads have been constructed, as in the cluses of the Jura, travellers are obliged to scale steep heights in order to pass from valley to valley. It is this want of practicable roads which renders military operations in Bosnia so difficult and perilous.

Great armies have at all times remained to the east of the mountain masses referred to, passing from the valley of the Vardar into that of the Morava, whose springs almost intermingle their waters. In that locality we meet with the bed of an ancient lake, through which flows the Sitnitza, one of the upper tributaries of the Servian Morava: this is the plain of Kosovo, the "field of black birds," which reminds all southern Slavs of painful events. It was there the power of the Servians succumbed in 1389, and, if we may credit ancient heroic songs, more than 100,000 men perished in a single day. Five hundred years have passed away since this great disaster, but the Slavs have never ceased to hope for a day of vengeance, and they look forward to the time when on this very field they may reconquer the independence they have lost.

The similarity between the mountains of Bosnia and of the Jura is rendered complete by the existence of grottoes, sink-holes, and subterranean rivers. Sink-holes from 60 to 100 feet in diameter, and shaped like funnels, are met with in many localities. Several rivers appear suddenly at the foot of a hill, and, after flowing on for a few miles, disappear again beneath some portal in the rocks. The table-land of the Herzegovina especially abounds in phenomena of this kind. The ground there is pierced by "sinks," or *ponors*, which swallow up the water derived from precipitation. "Blind valleys" and "troughs" present everywhere the traces of currents of water and of temporary lakes, and after heavy rains the subterranean basins sometimes rise to the surface, and a river then flows for a time along the valley. As a rule, however, the inhabitants are compelled to

* Altitudes:—Mount Kom, 9,350 feet; Mount Durmitor, 8,860 feet; Glieb, 5,775 feet.

collect the water they require in cisterns, or to fetch it from long distances. Elsewhere the hydrography of the country is subject to annual changes. Lakes which still figure upon our maps are drained through subterranean passages only recently opened; other lakes are formed in consequence of some passage, which formerly carried off the surface water, having become choked with alluvium. No more curious river probably exists in the world than the Trebinishtitza, in the Western Herzegovina. It appears and disappears many times. One of its branches, flowing at one time on the surface, at others underground, crosses the plains of Kotesi, in turns a parched champaign country or a lake abounding in fish, and

Fig. 37.—Subterranean Beds of the Affluents of the Narenta.
Scale 1 : 1,925,000.

..... Subterranean Beds.
——— 20 Miles.

enters the Narenta. Other branches pass beneath the mountains, and gush out near the shores of the Adriatic. One of the most famous of these springs is that of Ombra, which pours its waters into the Bay of Gravosa, to the north of Ragusa.

"Where the rocks finish and the trees appear, there begins Bosnia." So said the Dalmatians formerly. But many parts of Bosnia have now lost their clothing of verdure. The table-lands of the Herzegovina and Montenegro, no less than Dalmatia, have been despoiled of their forests, but Bosnia proper still remains a country of woods. Nearly one-half its area is covered with forests. In the valleys trees have almost disappeared, for the peasant is allowed to wield his axe

without hindrance, but in the virgin forests of the mountains trees still abound. The principal trees of Europe are met with in these magnificent woods: walnut-trees, chestnut-trees, limes, maples, oaks, beeches, ash-trees, birches, pines, firs, and larches. Austrian speculators, unfortunately, avail themselves of the roads which begin to open up the interior of the country to devastate these forests, which ought to be preserved with the greatest care. The song of birds is but rarely heard in these sombre woods, but wild animals abound in them. They shelter bears, wild boars, and deer, and the number of wolves is so large that their skins form one of the most important articles of Bosnian commerce. Taken as a whole, Bosnia ranks among the most fertile countries of Europe, and few regions surpass it in the beauty of its rural scenery. In some parts of the country, and particularly near the Save, large herds of hogs, almost wild, roam through the oak forests. Hence the epithet of "country of hogs" which the Turks have derisively given to Bosnia.

With the exception of the Jews, the gipsies, and the few Osmanli officials, soldiers, and merchants in the principal towns, the entire population of the country is of Slav race. The inhabitants of Kraina, near the Austrian frontier, call themselves Croats, but they scarcely differ from the Bosnian Servians and Raitzes of ancient Rascia, now known as the sandjak of Novibazar. On the classical soil of Rascia originated most of those cherished *piesmas*, or popular songs, in which the Southern Slavs have deposited their national traditions. The Herzegovinians, in some respects, differ from their Bosnian kinsmen. They are the descendants of immigrants who came from the banks of the Vistula in the seventh century. Like their neighbours the Montenegrins, they are more voluble in their speech than the Servians proper, and make use of numerous peculiar turns of expression and a few words of Italian which have glided into their language.

Although most of the Bosnians are of the same race, they are divided by religious animosities, and these account for their state of political servitude. At the first glance it may cause surprise that the Slavs of Bosnia should not have succeeded in throwing off the Turkish yoke, like their kinsmen of Servia. Their country is more remote from the capital, and far less accessible than Servia. A conquering army coming from the south has not only to force numerous defiles, but has to contend, too, with the climate, which is far more severe than that of the remainder of the Balkan peninsula. But, in spite of these great natural advantages from a defensive point of view, every revolt has hitherto failed lamentably. We need not seek far for the cause of this: Christian and Mohammedan Bosnians are at enmity, and the Christians themselves are split up into Greeks, who are led by their *popes*, and Romans, who follow blindly their Franciscan priests. In their divided state they fall an easy prey to their oppressors, and servitude has degraded their character.

The Mussulmans of Bosnia call themselves Turks, but they are Slavs nevertheless, like their Christian compatriots, and, like them, speak Servian with a large admixture of Turkish words. They are the descendants of the nobles who, in

the fifteenth and sixteenth centuries, embraced Islamism in order to save their feudal privileges. They also number amongst their ranks the descendants of brigands, who changed their religion in order to be able to continue their trade without fear of punishment. This apostacy gave to the lords even greater power over their wretched dependants than they had formerly possessed. The hatred of caste was augmented by religious animosity, and they soon surpassed in fanaticism the Mohammedan Turks, and reduced the Christian peasantry to a condition of veritable slavery. A wild pear-tree is still pointed out near one of the gates of Sarayevo, upon which the notables occasionally suspended some unfortunate raya for their amusement. Whether beys or spahis, these Mohammedan Bosnians are the most retrograde element of old Turkey, and on several occasions, as in 1851, they even rose up in rebellion in order to maintain intact their ancient feudal privileges. Sarayevo, as a Mussulman city, stood under the special protection of the Sultan's mother, and possessed most extravagant privileges, which converted it into a state in the state more hostile to Christianity than the Sublime Porte itself.

Even in our own days the Bosnian Mussulmans possess far more than their proper share of the land. The country is divided into *spahiliks*, or Mussulman fiefs, which are transmitted, in accordance with the custom of the Slavs, indivisibly to all the members of the family. The latter choose the most aged or most valorous of their members as their head. Until recently the Christian peasants were compelled to work for these Mussulman communities; and they were called upon to bear the chief burden of taxation and of other expenses. It is natural, under these circumstances, that the Christians of Bosnia should shun agriculture in order to devote themselves to trade, and nearly the whole of the commerce is in the hands of the Christians of the Herzegovina and of their co-religionists from Slavonian Austria. The Spanish Jews form communities in the principal towns, where they carry on their usual commercial pursuits and money-lending on tangible securities. They still talk Spanish amongst themselves, and never mention without emotion the name of the country which sent them into exile.

The number of Mussulmans hardly exceeds one-third of the total population of Bosnia, and they are said to remain stationary, or even to diminish, whilst the more fecund Christians increase in numbers.*

For the rest, the Bosnians, in spite of the differences in their religious belief, possess the same natural gifts as their Servian kinsmen, and, whatever destinies may be in store for them, they will in the end rise to the same level of intelligence. They are frank and hospitable, brave in battle, industrious, thrifty, of a poetical turn, fast as friends, and true as lovers. The marital ties are respected,

* According to Blau (1872), Bosnia, including the Herzegovina and Rascia, has 1,150,000 inhabitants, comprising 590,000 Greek Catholics, 164,000 Roman Catholics, 378,000 Mussulmans, 12,300 gipsies, and 5,700 Jews. The same author states the population for 1855 to have amounted to 893,384 souls, including 286,000 Mussulmans. According to an English Consular Report (1873), the population is 1,084,162, including 461,048 Mussulmans; and according to Professor Yakshity, 1,357,984 souls, including 474,000 Mussulmans.

and even the Mussulmans reject the polygamy permitted by the Koran. In the Herzegovina the women enjoy much liberty, and in many villages there are even back doors to the houses, in order that they may be able to gossip with their neighbours without going into the street. In Northern Bosnia, however, the Mussulman women are wrapped up closely in white linen sheets, and are hardly able to see a few steps before them. But, in spite of these good qualities, there exists an amount of barbarity, ignorance, superstition, and fanaticism, amongst Christians and Mohammedans alike, which is truly astounding. Incessant wars, tyranny on the one side, and servitude on the other, have brutalised their manners. The want of roads, the extensive forests, and the precipitous mountains have placed them beyond the reach of civilising influences. There are hardly any schools, and the few monasteries which supply their places are of little use, for the monks themselves are steeped in ignorance, and their pupils at most learn to chant a few hymns. Besides this, the immense consumption of *slibovitza* undermines the health of the people and demoralises them, and it has been estimated that every Bosnian—man, woman, or child—drinks annually no less than thirty-four pints of this detestable plum-brandy.

It may be matter for surprise that bustling towns should exist in so rude a country, but the natural resources of Bosnia are so great that a certain amount of local trade was sure to spring up. Isolated as they are, the Bosnians are thrown upon their own resources. They grind their own flour, manufacture their arms, stuffs, and iron implements, and the exchange of these commodities has given rise to commerce in the cities most favourably situated as entrepôts, the principal amongst which are Sarayevo, or Bosna Serai, and Travnik, the ancient capital of the country, picturesquely situated at the foot of an ancient castle. Banyaluka, which is connected with Austria by a railway, has some trade with Croatia; Tuzla extracts salt from its abundant brine springs; Zvornik, which guards the frontier of Servia, also carries on some trade with that country; Novibazar has commercial relations with Albania; Mostar and Trebinye import a few articles from Dalmatia. The populations of these towns have not, however, been solely attracted by trade and industry, for the insecurity of the country has also contributed to that result. There is no part of Europe, the neighbouring Albania and the polar regions of Scandinavia and Russia excepted, which is so rarely visited by strangers, and this isolation will only cease when the proposed international railway shall have joined it to Saloniki and Constantinople.*

VI.—Bulgaria.

The centre plateau of Turkey is still amongst the least-known countries of the Balkan peninsula, although it is intersected by the great highways which connect Thracia with Bosnia, and Macedonia with the Danube. This plateau,

* Principal towns of Bosnia:—Sarayevo, 50,000 inhabitants; Banyaluka, 18,000 inhabitants; Zvornik, 14,000 inhabitants; Travnik, 12,000 inhabitants; Novibazar, 9,000 inhabitants; Trebinye, 9,000 inhabitants; Mostar, 9,000 inhabitants; Tuzla, 7,000 inhabitants.

known to the ancients as Upper Mœsia, consists of a vast granitic table-land, rising to an average height of 2,000 feet. Its surface is diversified by several *planinas*, or mountain chains, of small relative height, and by domes of trachyte, the remains of ancient volcanoes. Its numerous depressions were formerly filled with water, and the contours of the ancient lakes can still be traced. They have been gradually filled up by alluvium, or drained by rivers. The most remarkable amongst these ancient lacustrine basins are now represented by the fertile plains of Nish, Sofia, and Ikhtiman.

The superb syenitic and porphyritic mountain group of Vitosh forms the

Fig. 38.—Mount Vitosh and its Environs.
According to F. von Hochstetter. Scale 1 : 1,058,000.

eastern bastion of the Mœsian plateau. Immediately to the east of it the deep valley of the Isker pierces the whole of the Balkan Mountains, and, crossing the plain of Sofia, takes its course in the direction of the Danube. The upper valley of this river and the plain mentioned form the true geographical centre of European Turkey. From Sofia diverge some of the most important roads of the peninsula, one leading through the valley of the Isker to the Lower Danube, another along the Morava valley into Servia, a third by way of the Maritza into Thracia, and a fourth down the Struma into Macedonia. It is said that Constantine the Great, struck by these important natural advantages of Sofia, then called Sardica, thought of making it the capital of his empire.

TIVOLI.

The Turks apply the name of Balkans to all the mountain ranges of the peninsula, but geographers restrict that term to the Hæmus of the ancients. This mountain rampart begins to the east of the basin of Sofia. It does not form a regular chain, but rather an elevated terrace sloping down gently in the direction of the Danube, whilst towards the south it presents an abrupt slope, it appearing almost as if the plateau on that side had suddenly sunk to a lower level. The Balkan consequently presents the appearance of a chain only when looked at from the south. But its contours even there are only slightly undulating; there are neither abrupt projections nor rocky pyramids, and the prevailing character is that of long-stretched mountain ridges. The porphyritic mountain group of Chatal, which rises to the south of the principal chain, constitutes the only exception to this gentleness of contour. Though inferior in height to the summits of the Balkan, its steep precipices, slashed crests, and chaotic rock masses strike the beholder, and the contrast between this mass of erupted rock and the gentle slopes of the calcareous hills which surround it is very great.

The uniformity of the northern slopes of the Balkan is such that, in many places, a traveller is able to reach the crest without having come in sight of mountains. When the woods have disappeared from the Balkan, these undulating slopes will be deprived of their greatest charm; but, as long as the forests ornament them as now, the country will remain one of the most delightful in Turkey. Running streams flow through each valley, bordered by pastures as brilliantly green as are those of the Alps; the villages are built in the shade of beech-trees and oaks; and nature everywhere wears a smiling aspect. But the plains which extend to the Danube are barren, and sometimes not a single tree is visible. The inhabitants, deprived of wood, are dependent upon cow-dung dried in the sun for their fuel, and they dig for themselves holes in the ground, where they seek protection from the cold of winter.

The core of the Balkan, between the basin of Sofia and that of Slivno, consists of granite, but the terraces which descend towards the Danube present every geological formation, from the metamorphic to the most recent rocks. The cretaceous formation occupies the largest area in Bulgaria, and the rivers rising in the mountains, in traversing it, form picturesque valleys and defiles. Ancient fortresses defend each of these valleys, and the towns have been built where they debouch upon the plain. Tirnova, the ancient capital of the tsars of Bulgaria, is the most remarkable of these old bulwarks of defence. The Yantra, on debouching there from the mountains, winds about curiously; steep cliffs form an amphitheatre, in the centre of which rise two precipitous isolated rocks, crowned formerly by walls and towers. The houses of the town are built on the slopes, and its suburbs extend along the foot of the cliffs.

A singular parallelism has been noticed on the northern slopes of Balkan. The elevated mountain saddles, crests of secondary chains, geological formations, the faults which give rise to the meandering of the rivers, and even the Danube itself, all follow the same direction, from west to east. As a consequence, each of the parallel valleys descending from the Balkans offers similar features; the popula-

tion is distributed in the same manner; and the towns occupy analogous positions. The valley of the Lom offers the only exception to the rule, for its direction is towards the north-west. It debouches upon the Danube at Rustchuk, and its green orchards and gardens are hemmed in by dazzling white cliffs of chalk rising to a height of about 100 feet.

The symmetry would be almost complete in Northern Turkey if it were not for the detached arid hills of the Dobruja, which force the Danube to make a wide détour to the north. Rising in the low and swampy delta of the Danube, these hills appear to be much higher than they are. In reality they do not exceed 1,650 feet in height. It is possible that during some very remote geological epoch the Danube took its course to the south of these hills, through the depression which has been utilised for the construction of the first Turkish railway. Trajan, who feared that the Goths might obtain a footing in this remote corner of the Roman empire, constructed one of those lines of fortifications here which are known throughout the countries of the Lower Danube as Trajan's Walls. Remains of walls, ditches, and forts may still be traced along the banks of the marshes, and on the heights commanding them. This country of the Dobruja is the "savage hyperborean region" where Ovid, exiled from Rome, wept for the splendours of the capital. The port of Tomi, the place of his banishment, is the modern Kustenje.

To the north of the Gulf of Burgas, which is the westernmost extremity of the Black Sea, rise the fine porphyry mountains which terminate in the superb Cape of Emineh. They are sometimes described as an eastern prolongation of the Balkan, but erroneously, for the ancient lacustrine basin of Karnabat, now traversed by a railway, separates them from the system of the Hæmus. The granitic plateaux and mountains of Tunja and Stranja, which command the wide plain of Thracia on the north, are likewise separate mountain ranges. The Southern Balkan is, in reality, without ramifications or spurs, except in the west, where the mountains of Ikhtiman and of Samakov, so rich in iron ore and thermal springs, and other transverse chains, connect it with the mountain mass of the Rhodope. The upper basin of the Maritza River, enclosed between the Balkan and the Rhodope, has the shape of an elongated triangle, whose apex, directed towards the plain of Sofia, indicates the point of junction between the two systems. The whole of this triangular depression, with its lateral ramifications, was formerly occupied by lakes, now converted into bottom-lands of marvellous fertility. The passes near the apex of this triangle are naturally points of the highest strategical and commercial importance. Through one of them, still marked by ancient fortifications, and known as Trajan's Gate, passed the old Roman highway, and there, too, the railway now in course of construction will cross the summit between the two slopes of the peninsula. This is the true "gateway of Constantinople," and from the most remote times nations have fought for its possession. The numerous tumuli scattered over the neighbouring plains bear witness to many a bloody struggle.

The spurs of the Rhodope intermingle with those of the Balkan, and the lowest

pass which separates the two still exceeds 3,000 feet in elevation. The Rilo Dagh, the most elevated mountain mass of the Rhodope, boldly rises at its northern extremity, and, to use the expression of Barth, forms the shoulder-blade of junction. Its height is 9,580 feet. It rises far beyond the region of forests, and its jagged summits, pyramids, and platforms contrast strikingly with the rounded outlines of the Balkan. But the lower heights, surrounded by this imposing amphitheatre of grand summits, are covered with vegetation. Forests of pines, larches, and beech-trees, the haunts of bears and chamois, alternate with clumps of trees and cultivated fields, and the villages in the valleys are surrounded by meadows, vineyards, and oaks. Picturesque cupolas of numerous monasteries peep out amongst the verdure: to their existence the mountain owes its Turkish name of Despoto Dagh, *i.e.* "mountain of the parsons." The Rilo Dagh, likewise famous on account of its monasteries, has altogether the aspect of the Swiss Alps. The moist winds of the Mediterranean convey to it much snow in winter and spring, but in summer the clouds discharge only torrents of rain, and the snow rapidly disappears from the flanks of the mountains. These sudden rain-storms are amongst the most remarkable spectacles to be witnessed. In the forenoon the mist which hides the tops of the mountains grows dense by degrees, and heavy copper-coloured clouds collect on the slopes. About three in the afternoon the rain begins to pour down, the clouds grow visibly smaller, first one, then another summit is seen through a rent in the watery vapours, until at last the air has become purified, and the mountains are lit up in the sunset.

To the south of the Rilo Dagh rises the mountain mass of Perim, hardly inferior to it in height. This is the Orbelos of the ancient Greeks, and the rings to which Noah made fast his ark when the waters subsided after the deluge are still shown there, and even Mussulman pilgrims pay their devotions at this venerated spot. It is the last high summit of the Rhodope. The mountains to the south rapidly decrease in elevation, though the granitic formation to which they belong is spread over a vast extent of country from the plains of Thracia to Albania. The extent of the hilly region connected with the Rhodope is still further increased by numerous groups of extinct volcanoes, which have poured forth vast sheets of trachytic lava. The rivers which flow from the central plateau of Turkey into the Ægean Sea have cut for themselves deep passages through these granites and lavas, the most famous amongst which is the "Iron Gate" of the Vardar, or Demir Kapu, which formerly figured on our maps of Turkey as a large town.

The aspect of the crystalline mountain masses to the west of the Vardar is altogether of an Alpine character, for the peaks not only attain a high elevation, but snow remains upon them during the greater portion of the year. The Gornichova, or Nije, to the north of Thessaly, rises to a height of 6,560 feet; and the Peristeri, whose triple summit and snow-clad shoulders have been likened to the spread-out wings of a bird, and which rises close to the city of Bitolia, or Monastir, is more elevated still. The mountains of ancient Dardania enclose extensive circular or elliptical plains, and the most remarkable amongst these,

namely, that of Monastir, has been compared by Grisebach, the geologist, to one of those huge crater lakes which the telescope has revealed to us on the surface of the moon. In most of these plains we meet with swamps or small lakes, the only remains of the sheets of water which at one time covered them. The most extensive of these lakes is that of Ostrovo. The Lake of Kastoria resembles the filled-up crater of a volcano. In its centre rises a limestone hill joined to the shore by an isthmus, upon which is built a picturesque Greek town.

According to Viquesnel and Hochstetter, traces of glaciers do not exist in any of these ancient lacustrine basins, or on the flanks of the mountains. It is certainly remarkable that whilst other European mountains—as, for instance, the Vosges and the mountains of Auvergne—have passed through a glacial epoch, the far more elevated Peristeri, Rilo Dagh, and Balkan, under about the same latitude as the Pyrenees, should never have had their valleys filled by moving rivers of ice.*

All the large rivers of European Turkey belong to the Bulgarian regions of the Balkan or Hæmus. In Bosnia there are merely small parallel rivers flowing to the Save; Albania has only turbulent torrents forcing their way through wild gorges, like the Drin; but the Maritza, the Strymon or Karasu, the Vardar, and the Inje Karasu, which descend from the southern flanks of the Balkans, or originate in the crystalline mountain masses of the Rhodope, are large rivers, which bear comparison with the tranquil streams of Western Europe. As yet we know but little about their mode of action. The volume of water discharged by them has never been measured, and they are hardly made use of for purposes of navigation or irrigation. They all traverse ancient lake basins, which they have filled up gradually with alluvium, and converted into fertile plains. This work of filling up still goes on in the lower portions of these fluvial valleys, where extensive marshes, and even gradually shrinking lakes, abound. One of these lakes, the Takhino, through which the Strymon flows before it enters the Ægean Sea, is said to be the Prasias of Herodotus, and its aquatic villages were no doubt similar to the pile dwellings discovered in nearly all the lakes of Central Europe.

The Danube, to the north of the Dobruja, performs an amount of geological work, in comparison with which that of the Maritza, the Strymon, and Vardar sinks into insignificance. That mighty river annually conveys to the Black Sea a volume of water far in excess of that which is carried down the rivers of all France, and the solids which it holds in suspension are sufficient to cover an area of ten square miles to a depth of nine feet. This enormous mass of sand and clay is annually deposited in the swamps and on the banks of the delta, and the slow but steady growth of the latter is thus sufficiently explained. Even the ancients

* Altitudes in Bulgaria, according to Hochstetter, Viquesnel, Boué, Barth, and others:—Vitosh, 8,080 feet; Balkan, mean height, 5,600 feet; Chatal, 3,600 feet; hills of the Dobruja, 1,650 feet; Trajan's Gate, 2,625 feet; Pass of Dubnitza, 3,560 feet; Rilo Dagh, 9,500 feet; Perim Dagh, 7,875 feet; Gornichova, or Nije, 6,560 feet; Peristeri, 7,700 feet; basin of Sofia, 1,710 feet; basin of Monastir, 1,820 feet; Lake of Ostrovo, 1,680 feet; Lake of Kastoria, 2,050 feet.

anticipated a time when the Black Sea would be converted into a shallow pond abounding in sand-banks, and it must, therefore, afford some consolation to our mariners to be told that six million years must pass before the alluvium carried down the river will fill the whole of the Black Sea.

The large triangular plain which the Danube has conquered from the sea has not yet fully emerged from the waters. Lakes, and the remains of ancient bays, half-obliterated branches of the Danube, and the ever-changing beds of rivulets, have converted this delta into a domain, half land, half sea. More elevated tracts, consolidated by the attack of the waves, rise here and there above the melancholy mire and reeds, and bear a dense vegetation of oaks, olives, and beeches. Willows

Fig. 39.—The Delta of the Danube.
Scale 1 : 1,500,000.

fringe most of the branches of the river which take their winding course through the delta. Eighteen years ago the Danube had six mouths; it has now only three.

After the Crimean war the Western powers determined that the Kilia branch, which conveys to the Black Sea more than half the volume of the Danube, should thenceforth form the boundary between Rumania and Turkey. The treaty of Berlin (1878) assigns the whole of the delta, which has an area of about 4,000 square miles, including the only mouth of the river which is navigable, to Rumania. The mouth of the Kilia is closed by a bar of sand, which does not even permit small vessels to enter it.

The southern mouth, that of Khidrillis, or St. George, is likewise inaccessible. The centre branch, that of the Sulina, which has served the purposes of commerce from time immemorial, can alone be entered by vessels. But even this channel would not be practicable, in the case of large vessels, if our engineers had not improved its facilities of access. Formerly the depth of water on the bar hardly exceeded a fathom during April, June, and July; and even at times of flood was at most two or three fathoms. But by building convergent jetties, which guide the waters of the river into the deep sea, the depth of water has been increased to the extent of ten feet, and vessels drawing twenty feet can enter. Sulina is now one of the most important commercial ports of Europe, and a highly prized harbour of refuge on the Black Sea, which is so much dreaded by mariners on account of its squalls. We are indebted for this great public work to an international commission, which enjoys almost sovereign rights over the Danube as high up as Isakcha.*

The Bulgarians inhabit the country to the south of the Danube as far as the slopes of Mount Pindus, excepting only certain detached territories in the occupation of Turks, Wallachians, Zinzares, or Greeks. In the Middle Ages their

Fig. 40.—Comparative Discharge of the Mouths of the Danube.

Kilia Mouth. Sulina Mouth. St. George's Mouth.

kingdom was even more extensive, for it included the whole of Albania, and had Okhrida for its capital.

The origin of the Bulgarians has been a theme of frequent discussion. The Bulgarians of the Byzantines, who laid waste the plains of Thracia about the close of the fifth century, and whose name became a term of opprobrium, probably were a Ugrian race, like the Huns, and spoke a language akin to that of the Samoyeds. The name of these savage conquerors is sometimes derived from the Volga, on the banks of which they formerly dwelt; but their manners and appearance have undergone a singular change, and nothing now indicates their origin. Originally Turanians, they have been converted into Slavs, like their neighbours the Servians and Russians.

This rapid conversion of the Bulgarians into Slavs is one of the most remarkable ethnological phenomena of the Middle Ages. Even in the ninth century the Bulgarians had adopted the Servian language, and soon afterwards they ceased to speak their own. Their idiom is less polished than that of the Servians, and, possessing no literature, has not become fixed. The purest Bulgarian, it is said, may be heard in the district of Kalofer, to the south of the Balkan. The gradual transformation of the Bulgarians into Slavs is ascribed by some authors to the

* Cleared from Sulina (1873), 1,870 vessels of 532,000 tons. Value of cereals exported, £6,000,000.

prodigious facility for imitation possessed by that people; but it is simpler to assume that, in course of time, the conquering Bulgarians and the conquered Servians became amalgamated, and that, whilst the former gave a name to the new nation, the latter contributed their language, their manners, and physical features. Thus much is certain, that the inhabitants of Bulgaria must now be looked upon as members of the Slavonian family of nations. Together with the Servians, Croats, and Herzegovinians, they are the most numerous people of European Turkey; and, if the succession to the dominion of the Turks is to be decided by numbers alone, it belongs to the Servo-Bulgarians, and not to the Greeks.

The Bulgarians, as a rule, are not so tall as their neighbours the Servians; they are squat, strongly built, with a large head on broad shoulders. Lejean, himself a Breton, and others, consider that they bear a striking resemblance to the peasants of Brittany. In several districts, and notably in the environs of Philippopoli, they shave the head, a tuft of hair alone excepted, which they cultivate and dress into a tail as carefully as the Chinese. Greeks and Wallachians ridicule them, and many proverbial expressions refer to their want of intelligence and polish. This ridicule, however, they hardly deserve. Less vivacious than the Wallachian, or less supple than the Greek, the Bulgarian is certainly not deficient in intelligence. But bondage has borne heavily upon him; and in the south, where he is oppressed by the Turk and fleeced by the Greek, he looks unhappy and sad; but in the plains of the north and the secluded mountain villages, where he has been exposed to less suffering, he is jovial, fond of pleasure, fluent of speech, and quick at repartee. The inhabitants of the northern slopes of the Balkan, perhaps owing to a greater infusion of Servian blood, are better-looking, too, than other Bulgarians, and dress in better taste. A still finer race of men are the Pomakis, in the high valleys of the Rhodope, to the south of Philippopoli. Their speech is Bulgarian, but in no other respect do they resemble their compatriots. They are a fine race of men, with auburn hair, full of energy, and of a poetical temperament. We almost feel tempted to look upon them as the lineal descendants of the ancient Thracians, especially if it should turn out to be true that in their songs they celebrate Orpheus, the divine musician.

The Bulgarians, and especially those of the plains, are a peaceable people, recalling in no respect the fierce hordes who devastated the Byzantine empire. They are not warlike, like their neighbours the Servians, and do not keep alive in their national poetry the memory of former struggles. Their songs relate to the events of every-day life, or to the sufferings of the oppressed; and the "gentle *zaptieh*," as the representative of authority, is one of the characters most frequently represented in them. The average Bulgarian is a quiet, hard-working peasant, a good husband and father; he is fond of home comforts, and practises every domestic virtue. Nearly all the agricultural produce exported from Turkey results from the labour of Bulgarian husbandmen. It is they who have converted certain portions of the plain to the south of the Danube into huge fields of

maize and corn, rivalling those of Rumania. It is they, likewise, who, at Eski-Za'ara, at the south of the Balkan, produce the best silk and the best wheat in all Turkey, from which latter alone the bread and cakes placed upon the Sultan's table are prepared. Other Bulgarians have converted the noble plain of Kezanlik, at the foot of the Balkan, into the finest agricultural district of Turkey, the town itself being surrounded by magnificent walnut-trees and by rosaries, which furnish the famous attar of roses, constituting so important an article of commerce throughout the East. Amongst the Bulgarians between Pirot and Turnov (Tirnova), on the northern slope of the Balkan, there exist flourishing manufactures. Each village there is noted for a particular branch of industry. Knives are made at one, metal ornaments at another, earthenware at a third, stuffs or carpets elsewhere; and even common workmen exhibit much manual dexterity and purity of taste. An equally remarkable spirit of enterprise is manifested amongst the Bulgarians and Zinzares of the district of Bitolia, or Monastir. The town itself, as well as Kurshova, Florina, and others in its vicinity, are manufacturing centres.

The Bulgarians, peaceable, patient, and industrious as they are, have long borne the subjection in which they were held. But within the last decade or so a feeling of nationality, fostered by younger men who had spent some years in Servia or Rumania, has arisen amongst them. They have learned to look upon each other as members of the same family. The first occasion in which this new-born feeling of nationality was exhibited had reference to a question of religion. When the Turks conquered the country a certain number amongst them turned Mohammedan to escape oppression; but though they visit the mosques, they nevertheless still cling to the faith of their forefathers, venerate the same springs, and put their trust in the same talismans. A few joined the Roman Church, but a great majority remained Greek Catholics. Greek monks and priests, not long since, enjoyed the greatest influence, for during centuries of oppression they had upheld the ancient faith. Their presence vaguely recalled the times of independence, and their churches were the only sanctuaries open to the persecuted peasant. But the Bulgarians, in the end, grew discontented with a priesthood who did not even take the trouble to acquire the language of its congregations, and openly sought to subject them to an alien nation like the Greeks. Nothing was further from their thoughts than a religious schism. They merely desired to withdraw from the authority of the Patriarch of Constantinople, and to found a National Church of their own, as had been done by the Servians, and even by the Greeks of the new Hellenic kingdom. The Vatican of Constantinople protested, the Turkish Government proved anything but favourable to this movement of emancipation, but in the end the Greek priests were forced to retire—precipitately in some instances—and the new National Church was established.

The successful issue of this peaceable revolution inspired the leaders of the national movement with confidence, more especially as there was not wanting encouragement from abroad. The Turks succeeded in stamping out a few

isolated risings, but they utterly broke down before the Russian battalions who marched to support the claims of their Slav "brethren." The hopes of the originators of the war have only been realised in part; but the semi-independent principality of Bulgaria which has been created may possibly serve as the nucleus of a future state of larger extent, and even in those parts of Bulgaria which the powers have permitted to remain under the direct rule of the Turks the position of these latter has become exceedingly precarious. The number of Turks in Bulgaria is by no means inconsiderable. In Western Bulgaria, indeed, they are few, but in the East they live in compact masses, and, in conjunction with the Bulgarians who have adopted the language, dress, manners, and modes of thought of their conquerors, they form a majority of the population.

The Greeks, next to the Turks, are the most important element of the population of Bulgaria. They are not very numerous to the north of the Balkan, where their influence hardly exceeds that of the Germans and Armenians established in the towns. To the south of the Balkan, though not numerous relatively, they are much more widely distributed. One or two Greeks are met with in every village, carrying on trade or exercising some handicraft. They make themselves indispensable to the locality, their advice is sought for by all, and they impart their own spirit to the whole of the population. Where two or three of these Greeks meet they at once constitute themselves into a sort of community, and throughout the country they form a kind of masonic brotherhood. Their influence is thus far greater than could be expected from their numbers. There are a few important Greek colonies amongst the Bulgarians, as at Philippopoli and Bazarjik, and in a valley of the Rhodope they occupy the populous town of Stanimako, to the exclusion of Turks and Bulgarians. The ruins of ancient buildings, as well as the dialect of the inhabitants, which contains over two hundred Greek words not known to modern Greek, prove that Stanimako has existed as a Greek town for upwards of twenty centuries, and M. Dumont thinks that it is one of the old colonies of Eubœa.

The initiatory part played by the Greeks in Southern Bulgaria is played in the north by the Rumanians. The right bank of the Danube, from Chernavoda to the Black Sea, is for the most part inhabited by Wallachians, who are gradually gaining upon the Turks. Other colonists are attracted by the fertility of the plains at the northern foot of the Balkan. The Bulgarians are careful cultivators of the soil themselves, but the Rumanians nevertheless gain a footing amongst them, as they do with the Servians, the Magyars, and the Germans. They are more active and intelligent than the Bulgarians, their families are more numerous, and in the course of a generation they generally succeed in "Rumanising" a village in which they have settled.

Bulgarians and Turks, Greeks and Wallachians, isolated colonies of Servians and Albanians, communities of Armenians and of Spanish Jews, colonies of Zinzares and wandering tribes of Mohammedan Tsigani, have converted the

countries of the Balkan into a veritable ethnological chaos; but the confusion is greater still in the small district of Dobruja, between the Lower Danube and the Black Sea. In addition to the races enumerated, we there meet with Nogai Tartars, who are of purer blood than their kinsmen the Osmanli, and exhibit the Asiatic type in greater purity. Although they cultivate the soil, they have not altogether abandoned their nomad habits, for they wander with their herds over hill and dale. They are governed by an hereditary khan, as at the time when they dwelt in tents.

After the Crimean war several thousand Nogai Tartars, compromised by the aid which they had rendered the Allies, joined their compatriots in the Dobruja. On the other hand, about 10,000 Bulgarians, terrified at the approach of these much-maligned immigrants, fled the Dobruja, and sought an asylum in Russia, where they were assigned the lands abandoned by the Crimean Tartars. This exchange proved disastrous to both nations, for sickness and grief carried off many victims. More deplorable still was the lot of the Circassians and other Caucasian tribes, who, to the number of 400,000, sought a refuge in Turkey in 1864. It was by no means easy to provide accommodation for so large a host. The pasha intrusted with the installation of these immigrants sent many of them to Western Bulgaria, in the vain hope that they would cut off all contact between Servians and Bulgarians. The rayas were compelled to surrender to them their best lands, to build houses for them, and to supply them with cattle and seed-corn. This hospitable reception, compulsory though it was, would have enabled these immigrants to start in their adopted country with a fair chance of success, had they but deigned to work. This, however, they declined. Hunger, sickness, and a climate very different from that of their mountains, caused them to perish in thousands, and in less than a year about one-third of these refugees had perished. Young girls and children were sold to procure bread, and this infamous traffic became a source of wealth to certain pashas. The harems became filled with young Circassians, who were a drug in the market at that time, and the human merchandise not saleable at Constantinople was exported to Syria and Egypt. These Circassians, after thus suffering from sickness and their own improvident laziness, have played a part by no means glorious during the late war. Most of them appear to have left the country, and in their new homes in Asia Minor they prove as great a terror to the peaceable inhabitants as they did in Bulgaria.

Other refugees, more kindly treated by fate, have found an asylum in the Dobruja. They are Russian Cossacks, Ruthenians, and Muscovites of the "Old Faith," who left their steppes towards the close of last century in order to escape persecution. The Padisha, more tolerant than the Christian Empress of Russia, generously received them, and granted them land in various parts of his dominions. The Russian colonies in the Dobruja and in the delta of the Danube have prospered, and one of their settlements on the St. George's branch of the river is known as the "Cossacks' Paradise." Most of these Russians are engaged in the sturgeon fishery and the preparation of caviare. They have

proved grateful for the hospitality extended to them, and have always fought valiantly in defence of their adopted country. They retain their national dress, their language, and their religion, and do not mix with the surrounding populations.

In addition to the above, we meet in the Dobruja with colonies of Germans, Arabs, and Poles, and, in the new port of the Sulina, with representatives of many nations of Europe and Asia.

There are few countries where the great international high-roads are as plainly traced by nature as in Bulgaria. The first of these roads is formed by the Danube. The Turkish towns along its banks—Viddin, Shishtova, Rustchuk, and Silistria—are taking an increasing share in European commerce. This highway is continued along the shores of the Black Sea, where there are several commercial harbours, the most important being Burgas, a great grain port. This natural highway, however, has become too circuitous for purposes of commerce. A railway has therefore been built across the isthmus of the Dobruja, from Chernavoda to Kustenje, and a second line connects Rustchuk, on the Danube, with Varna, on the Black Sea, the latter line crossing the whole of Eastern Bulgaria, and touching the towns of Razgrad and Shumna. A third line, now in course of construction, will cross the Balkans by a depression to the south of Shumna, and traversing the plain in which the towns of Yamboly and Adrianople are built, will connect the Lower Danube with the Ægean Sea. A third route, still farther to the west, passes Turnov, or Tirnova, the ancient capital of the tsars of Bulgaria, and runs over the Shipka Pass, of famous memory, to Kezanlik and Eski-Za'ara.

These railways, already opened for traffic or approaching completion, certainly shorten the journey between Western Europe and Constantinople; but it is proposed now to avoid the circuitous navigation of the Lower Danube altogether, by joining the railway system of Europe to that of Turkey. One of these proposed railways will pass through Bosnia, and down the valley of the Vardar to Saloniki; another will follow the ancient Roman road, which connected Pannonia with Byzantium, and which was paved in the sixteenth century as far as Belgrad. The principal cities along this great highway are Nish, on a tributary of the Morava, close to the frontier of Servia; Sofia, the ancient Sardica, on the Isker, a tributary of the Danube; Bazarjik, or "the market;" and the fine town of Philippopoli, with its triple mountain commanding the passage of the Maritza. These towns, on the completion of the railway, cannot fail to become of great commercial importance. A hideous monument near Nish will, perhaps, be pointed out to tourists attracted thither on the opening of the railway. It was erected to remind future generations of a deed of "glory." This trophy of Kele-kalesi consists of a tower built of the skulls of Servians, who, rather than fall alive into the hands of their enemies, blew themselves up together with the redoubt which they defended. A governor of Nish, more humane than his predecessors, desired to remove this abominable piece of masonry, which no raya passes without a shudder, but Mussulman fanaticism forbade it.

The influence of commerce cannot fail to modify largely the manners and customs of a nation as supple and pliable as are the Bulgarians. War has brutalised the Albanians, and slavery degraded the Bulgarians. In the towns, more particularly, they have sunk very low. The insults heaped upon them by Mussulmans, and the contemptuous manner in which they were treated, rendered them abject and despicable in their own eyes. Demoralised by servitude and misery, given up to the mercy of their rich compatriots, the *chorbajis*, or "givers of soup," they became shameless and low-minded helots. The Bulgarian women, in the towns more particularly, presented a spectacle of the most shameful corruption, and their want of modesty, their coarseness, and ignorance fully justified the contempt in which they were held by their Mohammedan sisters. Even as regards education the Turks were in advance of them: not long ago their schools relatively were more numerous, and the instruction given in them was of a superior order. Christian villages, moreover, were never so clean or pleasant as those of the Turks.

But, whatever may have been the case in the past, things have already begun to mend. The Turks, as a body, may still be the superiors of the Bulgarians, as regards probity and a respect for truth, but they work less, and become impoverished by degrees. In the country the land gradually passes into the hands of the rayas, in the towns the latter monopolize nearly all the trade. The Bulgarians, moreover, have learnt to appreciate the importance of education; they have founded schools and colleges, have set up printing presses, and send their young men to be educated at the universities of Europe. The young Bulgarians in the mixed colleges of Constantinople invariably make the most satisfactory progress in their studies. This revival of learning is a most hopeful sign of vitality. If persevered in, the Bulgarian race, which has been dead, as it were, for so many centuries, may again play its part in the world's history. The atrocities of which Bulgaria has recently been the scene may retard this regeneration, but they certainly cannot stop it.*

* The following are the principal towns of Bulgaria, with the number of their inhabitants:—

Shumna (Shumla)	50,000	Bazarjik	18,000
Rustchuk	50,000	Nish	16,000
Philippopoli (Felibe)	40,000	Veleze (Koprili)	15,000
Bitolia (Monastir)	40,000	Razgrad	15,000
Skoplie (Uskub)	28,000	Turnov (Tirnova)	12,000
Kalkandelen	22,000	Sliven (Slivno)	12,000
Sofia	20,000	Prilip	12,000
Vidin	20,000	Kezanlik	10,000
Silistria	20,000	Stanimako	10,000
Shishtova	20,000	Florina	10,000
Varna	20,000	Kurshova	9,000
Eski-Za'ara	18,000	Sulina	5,000

VII.—Present Position and Prospects of Turkey.

The events of the last two years would almost make it appear as if the prophecies about the "sick man" were about to be fulfilled. Who can doubt that the Turkish empire is largely indebted for its continued existence to the jealousies which divide the councils of Europe? Still, Turkey, within recent times, has exhibited a wonderful amount of vitality. New provinces have been incorporated with the empire in Arabia; a rebellion in the north-western provinces of European Turkey, originating in the misgovernment of the country, but aided and abetted by Russia, has been suppressed with a strong hand; and the resistance offered to Russia herself has proved far more formidable than could have been expected. The fortunes of war, however, have gone against the Ottomans. Their empire has been curtailed, but it has not yet disappeared from the map of Europe, and there are those amongst the politicians who put faith in their capacity for reform, and who hope to maintain this Mohammedan power as a bulwark to the encroachments of Russia. The prospects at present, however, are by no means of a cheering nature. The new principality of Bulgaria will form a focus of attraction to all Bulgarians still remaining under the direct rule of the Turks. Bosnia, placed under Austrian rule, may almost be looked upon as having been severed from the empire. The Greeks are impatiently urging their excessive claims. The old state craft of the Osmanli, which consisted in playing off one nationality against the other, appears to avail no longer. In all parts of the empire revolt is raising its head. Whether Turkish statesmen will attend to the advice of western statesmen, who desire to see the Bosphorus and the Dardanelles in the possession of a powerful state antagonistic to Russia, time alone can show.

And, indeed, what can be expected in an empire in which caprice reigns supreme? The Padishah is lord of the souls and bodies of his subjects; he is commander-in-chief of the army, supreme judge, and sovereign pontiff. In former times his power was practically limited by semi-independent feudatories, but since the fall of Ali Pasha and the massacre of the janissaries he is restrained only by customs, traditions, and the demands of the Governments of Europe. He is the most despotic sovereign of Europe, and his civil list the heaviest in proportion to the revenues of the country. The household of the late Sultan and of the members of his family was exceedingly numerous. There lived in the Seraglio an army of 6,000 servants and slaves of both sexes, of whom 600 were cooks. These servants, in turn, were surrounded by an army of hangers-on, who were fed from the imperial kitchens, to which no less than 1,200 sheep were supplied daily by the contractors.

Current expenses were sufficiently heavy, but more considerable still was the extraordinary expenditure incurred in the construction of palaces and kiosks, the purchase of articles *de luxe* and of curiosities, and for all kinds of prodigalities. The present Sultan, driven thereto by the precarious position of his empire, has limited his expenditure. But will this last?

Ministers, valis, and other high officials of the empire faithfully follow in the footsteps of their sovereign, and their expenditure always exceeds their salary, though the latter is fixed on a most liberal scale. As to the lower officials, their salaries are small and irregularly paid; but it is understood that they may recoup themselves at the expense of the ratepayers. Everything can be purchased in Turkey, and, above all, justice. The state of the finances is most lamentable; loans are raised at usurious interest; and so badly is the country governed that it has been seriously proposed to intrust the management of its finances to a syndicate of the European powers! *

Agriculture and industry progress but slowly under such misgovernment. Vast tracts of the most fertile land are allowed to lie fallow; they appear to be no one's property, and any one may settle upon and cultivate them. But woe to him if he conducts his operations with profit to himself; for no sooner is he observed to become wealthy than his land is laid claim to on behalf of the clergy or of some pasha, and he may consider himself lucky if he escapes a bastinado. The peasants, in many districts, are careful not to produce more than they absolutely require to live upon, for an abundant harvest would impoverish them—would merely lead to a permanent increase of taxation. The tradesmen in the smaller towns are equally careful to conceal their wealth, if they possess any.

Many Mussulman families have ceded to the mosques their proprietary rights. They thus enjoy merely the usufruct of their lands, but are freed, on the other hand, from the payment of taxes, and the land remains in the possession of their families until they become extinct. These lands are known as *vakufs*, and they form about one-third of the area of the whole empire. They contribute actually nothing towards the revenues of the State. In the end they aggrandise the vast estates of the Mohammedan clergy. Taxation weighs almost exclusively upon the lands cultivated by the unfortunate Christians; and in proportion as the vakufs increase, so does the produce of taxation diminish. This must in the end necessarily lead to a secularisation of the estates of the clergy; and even now, to the great horror of the old Turks, the Ottoman Government is timidly extending its hands towards the estates belonging to the mosques of Constantinople.

The Servian, Albanian, and Bulgarian peasants actually cultivate their land in spite of their masters. A single fact will show this. Certain collectors of tithes, in order to prevent fraud, insist upon the peasants leaving the whole of the harvest upon the fields until they have withdrawn their tenth part. Maize, rice, and corn are exposed there to the inclemencies of the weather and other destructive agencies; and it frequently happens that the harvest has deteriorated to the extent of one-half in value before the Government impost is levied. Sometimes the peasants allow their grapes or fruit to rot rather than pay the tithes. But it is not the tax-gatherer alone of whose conduct the peasant may complain; for he is exposed likewise to exactions by the middlemen with whom he comes into contact when selling his produce. "The Bulgarian works, but the Greek holds the plough." So says an ancient proverb; and this is still true at least of the

* Receipts for 1874, £20,400,000; debts in 1875, £220,000,000.

MUSSULMANS OF ADRIANOPLE, AND MUSSULMAN LADY OF PRISREND.

countries to the south of the Balkan, where the Bulgarian peasant is not always the proprietor of the land he tills. But where he does not directly work for a Greek or Mussulman proprietor, his harvest, even before it is cut, is frequently the property of a usurer; but he works on from day to day, a wretched slave, in the vain hope of becoming one day a free man.

The fertility of the soil on both slopes of the Balkans, in Macedonia, and in Thessaly is, however, such that in spite of mosques and tax-collectors, in spite of usurers and thieves, agriculture supplies commerce with a large quantity of produce. Maize, or "Turkish corn," and all cereals are grown in abundance. The valleys of the Karasu and Vardar produce cotton, tobacco, and dye stuffs; the coast districts and islands yield wine and oil, whose quality would leave nought to be desired, were a little more care bestowed upon their cultivation; and forests of mulberry-trees are met with in certain parts of Thracia and Rumelia, and the export of cocoons to Italy and France is increasing from year to year. Turkey, with its fertile soil, is sure to take a prominent part amongst the European states for the variety and superiority of its products. As to its manufactures, they will no doubt be gradually displaced on the opening of new roads of commerce. The manufacturers of arms, stuffs, carpets, and jewellery in the cities of the interior will suffer considerably from foreign competition, and many amongst them will succumb to it, unless they pass into the hands of foreigners. The great fairs, too, which are now held annually at Slivno and other places, and at which merchants from the whole of the empire meet to transact business—as many as a hundred thousand strangers being attracted occasionally to a single spot—will gradually give place to a regular commercial intercourse.

It is certain that the commerce of Turkey has increased of late years, thanks to the efforts of Greeks, Armenians, and Franks of all nations. The annual value of the exports and imports of the whole of the Ottoman empire in Europe and Asia is estimated at £40,000,000—a very small sum, if we bear in mind the resources of these countries, their many excellent harbours, and their favourable geographical position.

The Turks themselves perform but a very small share of the work that is done in their empire. Various causes combine to render them less active than the other races. They are the governing class, and their ambition naturally aspires to the honours and the luxury of *kief*; that is to say, of sweet idleness. Despising everything not Mohammedan, and being, besides, heedless and of a sluggish mind, they but rarely learn foreign languages, and are thus in a certain measure at the mercy of the other races, most of whom speak two or more idioms. Moreover, the fatalism taught in the Koran has deprived the Turk of all enterprise, and once thrown out of his ordinary routine, he is helpless. Polygamy and slavery are likewise two causes of demoralisation. It is true that the rich alone can permit themselves the luxury of a harem, but the poor learn from their superiors to despise women, they become debased, and take a share in that traffic in human flesh which is a necessary sequence of polygamy. Yet, in spite of the innumerable slaves imported in the course of four centuries from all the regions bordering upon

the Turkish empire; in spite of the millions of Circassian, Greek, and other girls transplanted into the harems, the Osmanli are numerically inferior to the other races of the peninsula. This dominant race—if the term race be applicable to the product of so many crossings—hardly numbers ten per cent. of the population of European Turkey. And this numerical inferiority is on the increase, for, owing to polygamy, the number of children surviving in Mohammedan families is less than in Christian families. We are not in possession of precise figures, but there can be no doubt that the Turks are on the decrease. The conscription, to which they alone are subject, has contributed towards this result, and becomes more difficult from year to year.

It has often been repeated since Chateaubriand that the Turks have but camped in Europe, and expect to return to the steppes whence they came. It would thus be a feeling of presentiment which induces the Turks of Stambul to seek burial in the cemetery of Scutari, hoping thus to save their bones from the profanation of the Giaour's tread on his return, as master, to Constantinople. In many places the living follow the examples of the dead, and a feeble current of emigration sets from the Archipelago and the coast districts of Thracia in the direction of Asia, carrying along many an old Turk discontented with the stir of European life. This migration, however, is but of very small importance, and does not affect the Osmanli of the interior. Nothing is further from the minds of the Turks of Bulgaria, the Yuruks of Macedonia, or the Koniarides, who have inhabited the mountains of Rumelia since the eleventh century, than to quit the land which has become their second home. The Turkish element in the Balkan peninsula can be got rid of only by exterminating it; that is, by treating the Turks more ferociously than they treated the native populations at the time of the conquest. We ought not to forget, at the same time, that the Turks, though far inferior in numbers to the other races, are nevertheless able to reckon upon the support of millions of Mohammedan Albanians, Bosnians, Bulgarians, Circassians, and Nogai Tartars. The Mussulmans constitute more than a third of the population of European Turkey, and, in spite of differences of race, they hold firmly together. Nor must it be forgotten that they are backed up by 150,000,000 co-religionists in other parts of the world.*

* Races and religions of Turkey in Europe (Servia, Montenegro, Rumania, and the Dobruja excluded):

		Total.	Mussulmans.	Greek Catholics.	Roman Catholics.	Other Christians.
Turks (Osmanli and Tartars)		1,643,000	1,643,000	—	—	—
Slavs	Servians	1,160,000	520,000	460,000	180,000	
	Bulgarians	2,485,000	600,000	1,865,000	20,000	—
	Poles, &c.	6,000	—	—	6,000	—
Greco-Latins	Greeks	1,460,000	70,000	1,390,000	—	—
	Rumanians	15,000	—	15,000	—	—
	Zinzares	130,000	—	130,000	—	—
Albanians		1,748,000	987,000	561,000	200,000	—
Armenians		111,000	—	—	10,000	101,000
Circassians		90,000	90,000	—	—	—
Jews		73,000	—	—	—	—
Tsigani (Gipsies)		93,000	50,000	43,000	—	—
Franks		35,000	—	—	30,000	5,000
Others		50,000	60,000	—	—	—
Total		9,109,000	4,020,000	4,464,000	446,000	106,000

According to F. Bianconi (1877) there are (including the districts ceded to Rumania, Servia, and Montenegro) 650,000 Osmanli Turks, 100,000 Tartars, 915,000 Servians, 3,360,000 Bulgarians, 3,020,000 Hellenes, 80,000 Rumanians, 80,000 Zinzares, 1,250,000 Albanians (630,000 of whom speak Greek), 110,000 Armenians, 200,000 Circassians, 80,000 Jews. Total, 9,845,000.

ETHNOGRAPHICAL MAP
OF
TURKEY IN EUROPE
By E.G. Ravenstein F.R.G.S.
Scale 1: 4000000
0 50 100 Miles
Reference
SLAV
S Servians
B Bulgarians
R Russians
GRECO-LATIN
Gr Greeks
Ru Rumanians
Z Zinzares
Sk Skipetars
I Italians
UGRIAN
T Turks
Ta Tatars
M Magyars
G Germans
A Armenians
Arabs
STYRIA
CROATIA
SLAVONIA
HUNGARY
GALICIA
BOSNIA
DALMATIA
SERVIA
HERZEGOVINA
MONTENEGRO
ALBANIA
ADRIATIC
Kecskemet
Szegedin
Fünfkirchen
Agram
Belgrad
Syrmia
Eszek
Sarajevo
Mostar
Ragusa
Prizren
Pristina
Uskub
Novibazar
Salonica
Monastir
Janina
Corfu
Durazzo
Scutari
Dulcigno
Antivari
Cattaro
Trebinje
Metkovich
Stolatz
Fiume
Trieste
Laibach
Klagenfurt
Graz
Marburg
Warasdin
Karlstadt
Essek
Peterwardein
Semlin
Mitrovitz
Shabatz
Valyevo
Krupanj
Ushitza
Rudnik
Kragujevatz
Jagodina
Kniashevatz
Alexinatz
Nish
Palanka
Kurshumlia
Vranja
Kumanovo
Ipek
Prizren
Kalkandele
Velezes
Monastir
Florina
Kastoria
Vodena
Salonica
Gallipoli
Dedeagatch
Rodosto
Constantinople
Adrianople
Philippopolis
Tirnova
Rustchuk
Silistria
Varna
Shumla
Widdin
Orsova
Temesvar
Arad
Grosswardein
Debreczin
Szolnok
Szabadka
Baja
Zombor
Neusatz
Peterwardein
Brood
Posega
Dubitza
Banjaluka
Travnik
Serajevo
Mostar
Metkovich
Ragusa
Cattaro
Scutari
Dulcigno
Antivari
Durazzo
Valona
Janina
Corfu
Prevesa
Arta
Larissa
Volo
Salonica
Monastir
Florina
Kastoria
Vodena
Gallipoli
Dedeagatch
Rodosto
Constantinople
Adrianople
Philippopolis
Tirnova
Rustchuk
Silistria
Varna
Shumla
Widdin
Orsova
Temesvar
Arad
Grosswardein
Debreczin
Szolnok
Szabadka
Baja
Zombor
Neusatz
Peterwardein
Brood
Posega
Dubitza
Banjaluka
Travnik
Serajevo
Mostar
Metkovich
Ragusa
Cattaro
Scutari
Dulcigno
Antivari
Durazzo
Valona
Janina
Corfu
Prevesa
Arta
Larissa
Volo
16°
18°
20°
22°
46°
44°
42°
40°

24°
26°
28°
30°
Bender
Tiraspol
Klausenburg
TRANSYLVANIA
Thorda
Maros Vasarhely
Schässburg
Mediasch
Hermannstadt
Fogaras
Kronstadt
MOLDAVIA
Fokshani
Galatz
Braila
Ismail
Kilia
Tulcha
Babadagh
Bolgrad
WALACHIA
Ploeshti
Kalentina
BUKURESHTI (Bucharest)
Krayova
Vidin
Karakal
Silistria
Rustchuk
Jurjevo
Shishtova
Nikopoli
Plevna
Lovatz
Vratza
Tirnova
Shumla
Varna
Balchik
Kustenje
Mangalia
Mejidie
DOBRUJA
BULGARIA
Sofia
Vitosh
Khoja Balkan
Gabrova
Kezanlik
Sliven
Eski Zagra
Yamboli
Burgas
Aidos
Philippople
Rilo Dagh
Adrianople
Kirk Kilisse
Midia
Demotika
Rodosto
CONSTANTINOPLE
Scutari
SEA OF MARMARA
Gallipoli
Enos
Saloniki
Seres
Kavala
Drama
Nevrekop
Melnik
Thasos
Samothraki
Imbros
Lemnos
Athos
ÆGEAN SEA
Mytilini
Bergama
Akhissar
Brussa
Balikesri
Edremid
Kirkagach
BLACK SEA
44°
42°
40°

We almost dread that the future may give birth to a struggle of extermination between the races of the peninsula, instead of to institutions enabling these diverse and partially hostile elements to develop themselves in peace and liberty. The Turks themselves begin to see the necessity of such institutions, and, in theory at least, have abandoned their policy of violence and oppression. All the nationalities of the empire, without reference to race or religion, are supposed to be equal before the law, and Christians are admitted to Government offices on the same terms as Mussulmans. No doubt these fine laws have for the most part hitherto remained a dead letter, but it would nevertheless be unjust if we denied that much progress towards an equalisation of the various races has been made.

Fortunately the despotism of the Turks is not the despotism of learning, based upon a knowledge of human nature, and directed to its debasement. The Osmanli ignore the art of "oppressing wisely," which the Dutch governors of the Sunda Islands were required to practise in former times, and which is not quite unknown in other countries. The pashas allow things to take their course as long as they are able to enrich themselves and their favourites, to sell justice and their favours at a fair price, and to bastinade now and then some unlucky wight. They do not inquire into the private concerns of their subjects, and do not call for confidential reports on families and individuals. Their Government, no doubt, is frequently violent and oppressive; but all this only touches externals. Such a government may not be favourable to the development of public spirit, but it does not interfere with individuals, and powerful national institutions, such as the Greek commune, the Mirdit tribe, and the Slav community, have been able to survive under it. Self-government is, in fact, more widely practised in Turkey than in the most advanced countries of Western Europe. It would have been difficult to force these various national elements under a uniform discipline, and the lazy Turkish functionaries generally leave things alone. The Frankish officials in the pay of the Turkish Government, in fact, more frequently interfere with the prejudices and privileges of the governed than do the Mussulman pashas of the old school.

It cannot be doubted for a moment that, in a time not very far distant, the non-Mohammedan races of Turkey will take the lead in politics, as they do already in commerce, industry, and education. The Osmanli of the olden school, who still wear the green turban of their ancestors, look forward towards this inevitable result with despair. They struggle against every measure calculated to accelerate the emancipation of the despised raya, and European inventions, in their eyes, are working a great social transformation to their injury; and, indeed, it is the raya who profits most from roads, railways, harbours, agricultural and other machines. Bosnians, Bulgarians, and Servians have learnt to look upon each other as brothers; Albanians and Rumanians are drawn towards the Greeks; all alike feel themselves as Europeans; and thus the way is being paved for the Danubian Confederation of the future.

The approaching completion of the railway from Vienna to Constantinople cannot fail to work a commercial revolution as far as the trade of a considerable portion of Eastern Europe is concerned. It will form a link in the direct line

between England and India, and to travellers and merchandise will afford the shortest route from the centre of Europe to the Bosporus. On its opening, Constantinople will be enabled to avail itself to the fullest extent of the highways of commerce which converge upon it. Still greater must be the political consequences of opening this line, for it will bring the populations of the Balkan peninsula into more direct and active contact with those of Austro-Hungary and the rest of Europe.

Fig. 41.—Commercial Highways converging upon Constantinople.
Scale 1 : 17,100,000.

VIII.—Government and Administration.

The Turkish empire occupies a vast area, the greater portion of which is governed by vassals, almost independent of the Sultan at Stambul. The vast territories of Egypt and Tunis are in that position. The interior of Arabia is in possession of the Wahabites; the coast of Hadramaut is inhabited partly by tribes acknowledging the suzerainty of England; and even between Syria and the Euphrates there

are numerous districts only nominally under the government of Turkish pashas, but in reality in the possession of predatory Bedwins. The Ottoman empire consists of the European provinces, Asia Minor, Armenia, Kurdistan, the basins of the Euphrates and Tigris, Hejaz and Yemen in Arabia, and Tripoli, with Fezzan and Barka, in Africa. These territories cover an area of no less than 1,134,910 square miles, but their population being far less dense than that of Western Europe, hardly exceeds 22,000,000 souls. The newly created principality of Bulgaria is expected to pay tribute, whilst "Eastern Rumelia,"

Fig. 42.—The Turkish Empire.

Scale 1 : 35,000,000.

in reality a portion of Bulgaria, will enjoy a degree of self-government not granted to the other provinces of the empire. Bosnia has been occupied by the Austrians, who will carry on its administration. The remainder of the country is divided into seven *vilayets*, or provinces; the vilayets are subdivided into *mutesarifliks*, or *sanjaks;* these latter into *kazas*, or cantons; and the kazas into *rahiés*, or parishes. Lemnos, Imbros, Samothrace, and Astypalæa, with

Rhodes and the islands along the coast of Anatolia, form a separate vilayet. These political divisions, however, are subject to frequent changes.*

The Sultan, or *Padishah*, concentrates all powers within his person. He is *Emir el mumenin*, or head of the faithful, and his conduct is guided solely by the prescriptions of the Koran and the traditions of his ancestors. The two most influential persons in the empire, next to him, are the *Sheik-el-Islam*, or Great Mufti, who superintends public worship and the administration of justice, and the *Sadrazam*, or Grand Vizier, who is at the head of the general administration, and is assisted by a council of ten ministers, or *mushirs*. The *Kislar Agasi*, or chief of the black eunuchs, to whom is confided the management of the imperial harem, is likewise one of the great dignitaries of the empire, and frequently enjoys the very highest influence. The legal advisers of the various ministries are known as *mufti*. *Efendi*, *bey*, and *aga* are honorary titles bestowed upon certain Government officials and persons of consideration. The title of *pasha*, which signifies "grand chief," is given to certain high civil or military functionaries. This title is symbolized by one, two, or three horse-tails attached to the top of a lance, a usage recalling the time when the nomad Turks roamed over the steppes of Central Asia.

The work of the various ministries is done by councils, and there thus exist a council of state, or *shuraï devlet*, councils of accounts, of war, of the navy, of public education, of police, &c. These various councils, in their totality, constitute the *divan*, or government chancery. There is also a supreme court of justice, with sections for civil and criminal cases. The members of these various official bodies are appointed by Government. Each of the subject "nations" is represented on the Council of State by two members, selected by the *Sadrazam*.

The vilayet is governed by a *vali*, the sanjak by a *mutesarif*, the kaza by a

* Area and population of the Turkish Empire :—

	Area, Square Miles.	Population.	Mohammedans per cent.
Constantinople	1,100	785,000	62
Adrianople (Edirneh)	12,840	681,000	36
Kosova (Upper Macedonia)	7,572	636,000	62
Saloniki (Macedonia)	24,450	1,282,000	51
Yanina (Thessaly and Epirus)	14,250	1,436,000	35
Shkodra, or Scutari (Upper Albania)	13,299	388,000	45
Novibazar (part of Bosnia)	3,259	146,000	63
Crete, or Candia	3,320	275,000	15
Total immediate possessions	80,090	5,529,000	47
East Rumelia (autonomous province)	13,663	746,000	36
Bulgaria (tributary principality)	24,660	1,773,000	38
Bosnia and Herzegovina (administered by Austria)	27,367	1,061,000	51
Turkey in Europe	145,780	9,109,000	44
Turkey in Asia	710,320	15,715,000	83
Tripoli and Barka (Africa)	344,500	1,010,000	100
Tributary: Samos	213	36,000	—
Tributary: Egypt	870,000	17,100,000	82
Tributary: Tunis	46,000	2,100,000	91
Total Ottoman Empire	2,116,813	45,070,000	77

Ceded by the treaty of Berlin (1878) :—To Rumania (Dobruja, &c.), 5,737 square miles, 221,000 inhabitants; to Servia, 4,296 square miles, 367,000 inhabitants; to Montenegro, 1,958 square miles, 116,000 inhabitants; to Russia (Kars and Batum), 10,000 square miles, 238,000 inhabitants; to Persia (Kotur), 350 square miles, 8,000 inhabitants; to England (Cyprus), 3,650 square miles, 150,000 inhabitants. Total, 25,941 square miles, 1,100,000 inhabitants.

kaimakan, the parish by a *mudir*. Each of these governors is supposed to act by advice of a council composed of the leading religious and civilian functionaries, and counting amongst its members several of the principal Mohammedan and non-Mohammedan inhabitants of the district. In reality, however, the vali appoints all these councils, and they are popularly known as the "Councils of the Ayes."

The rules which the supreme Government has deigned to lay down for its own guidance are embodied in the *hatti-sherif* of Gulhane, promulgated in 1839, and in the *hatti-humayum* of 1856. These hatts promise to all the inhabitants of the empire, without distinction of faith, equal rights, but have been carried out hitherto only very partially. A "constitution" was promulgated in December, 1876. It provides representative institutions, local self-government, and various improvements, but, like other efforts in the same direction, is likely to remain a dead letter. The Porte has been urged by England to introduce reforms of a most comprehensive nature, but with a Russian army encamped within a few days' march from Constantinople, and a large portion of the country in a state of revolt, it would be bold to predict what the immediate future may bring forth.

The religious and judicial organization of the country is jealously watched over by the Sheik-el-Islam and the priests, and cannot possibly be changed. The *imans* are specially charged with the conduct of public worship. They include *sheiks*, or preachers; *khatibs*, who recite the official prayers; and the *imans* properly so called, who celebrate marriages and conduct interments. Judges and imans form a body known as *ulemas*, at whose head is placed a *kazi-asker*, or chief judge, and who are divided hierarchically into *mollahs*, *kazis* (kadis), and *naibs*. They are not paid by the State, but fix their own emoluments by levying a tax upon goods under litigation and upon legacies; that is to say, the law itself encourages them in improbity. Mixed tribunals offer some guarantees to the non-Mohammedan inhabitants of the Ottoman empire.

The Greek Patriarch of Constantinople, as head of the Church in Turkey and civil director of the Greek communities, wields a considerable influence. He is elected by a synod of eighteen members, which administers the religious budget, and whose decisions in matters of faith are final. The three leading personages of the Latin rite are a patriarch at Constantinople and the two Archbishops of Antivari and Durazzo. The two Armenian Churches have each a patriarch at Constantinople.

It would endanger the Ottoman power in Europe if Christians were permitted to enter the army without limitation as to numbers. In former times they were excluded altogether, and in lieu of military service they paid a heavy capitation grant. At present it is understood officially that the *raya* may assist in the defence of the country, and may rise even to the dignity of *ferik* (general) and *mushir* (marshal), but in reality the army still consists almost exclusively of Osmanli and Mohammedans of various races. The active army (*nizam*) hardly numbers more than 100,000 men under arms in peace. It forms seven army corps, of which three are usually stationed in Europe, and is modelled on the Prussian system. The

two reserves, the *idatydal* and *redif*, hardly exceed another hundred thousand; but in case of need the army can be increased almost indefinitely by calling out irregulars, or *bashi-bozuks*, whose name recalls so many scenes of murder and horror.

The navy is powerful, if we compare it with the mercantile marine, and includes over twenty ironclads; but of the 50,000 sailors required to man it efficiently hardly a third would be forthcoming in case of need.

The new principality of BULGARIA, created by the treaty of Berlin, is not as extensive as the tributary Bulgaria provided for by the treaty of Stefano, but it nevertheless includes a very considerable extent of territory, stretching from the new frontiers of Servia to the shores of the Black Sea, and from the Danube to the Balkans and beyond. Its area is 24,660 square miles, its estimated population 1,773,000 souls, of whom hardly more than a million are Christian Bulgarians. Indeed, in the eastern portions of the country, towards the Black Sea, Turks and Mohammedan Bulgarians predominate, and their absorption will not constitute one of the smallest difficulties of the newly created state. Bulgaria is to be governed by an hereditary prince, to be elected by an assembly of the nobles of the country. It is to assume a portion of the Turkish debt, and to pay an annual tribute, to be determined upon hereafter by the great powers. It will have its own militia, but the fortresses along the Danube, as well as Shumla and Varna, are to be razed, and, with the Turks in possession of the Balkan passes, the country will almost be defenceless. In a large measure it must depend upon the sympathy which the Bulgarians are able to win amongst the European powers whether they will be able to maintain themselves as an independent community. Sofia, on the Upper Isker, has been fixed upon as the capital.

EASTERN RUMELIA (13,663 square miles, 746,000 inhabitants, of whom 265,000 are Mohammedans), which embraces the upper valleys of the Maritza and the Tunja, and extends in the east to the Black Sea, has been constituted an "autonomous" province, the Christian governor of which will be appointed by the Porte with the consent of the great powers. An international commission is engaged at present (November, 1878) with organizing its administration. The Turks will be permitted to garrison the Balkan passes, but their troops cannot be quartered upon the inhabitants. This province, too, is to have its militia, with officers appointed by the Sultan. Philippopolis (Felibe) is the capital.

The number of Christian Bulgarians outside the limits of these newly organized territories is probably half a million.

RUMANIA.*

THE Rumanians are certainly one of the most curious amongst European nations. The descendants of the conquerors of the ancient world, they live detached from, and far to the north-east of, the other nations of the Greco-Latin family, and not many years ago they were hardly known by name. The grave events of which the Lower Danube has been the scene since the middle of this century have brought these Rumanians prominently to the fore, and we know now that they differ essentially from their neighbours, be they Slav, Turk, or Magyar. They constitute, in fact, one of the most important elements amongst the populations of Eastern Europe, and numerically they are the strongest nation on the Lower Danube, the Bulgarians alone excepted.

The ethnological boundaries of Rumania are far wider than are the political ones, for they embrace not only Wallachia and Moldavia beyond the Carpathians, but also Russian Bessarabia, a portion of the Bukovina, the greater portion of Transylvania, as well as extensive tracts in the Banat and Eastern Hungary. The Rumanians have likewise crossed the Danube, and established themselves in portions of Servia and Bulgaria; and the settlements of their kinsmen, the Zinzares, sporadically extend far south to the hills of Thessaly and Greece. Rumania proper has an area of only 46,709 square miles, but the countries of the Rumanians occupy at least twice that extent, and their numbers exceed 8,000,000, most of whom dwell in a compact mass on the Lower Danube and the adjoining portions of Hungary and Russia.†

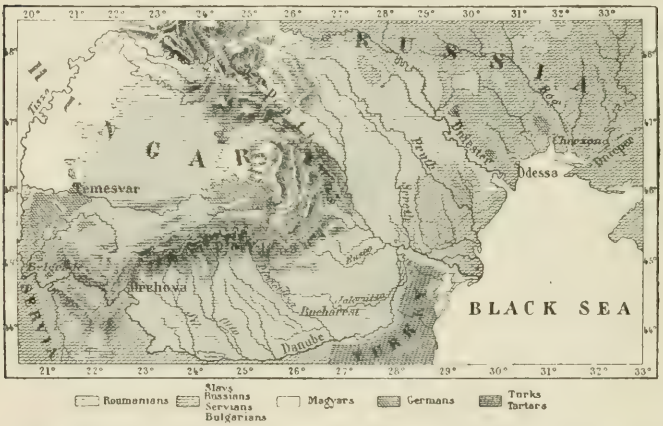
The Roman territories on the Lower Danube almost encircle the mountain

* Officially called Romania, and frequently spelt Roumania: in French it is Roumanie.

† Wallachia and Moldavia 4,460,000
Austro-Hungary 2,896,000
Bessarabia and other parts of Russia 600,000
Servia 155,000
Turkey 200,000
Greece 4,000
Total . . 8,315,000

masses of the Eastern Carpathians, as will be seen by a glance at our map, but only about one-half of this territory has been formed into an autonomous state, the remainder belonging to Hungary and Russia. If the national ambition of the Rumanians were to be realised, the natural centre of their country would not lie within the actual limits of the territory, but at Hermannstadt (called Sibiu by the Wallachians), or elsewhere on the northern slope of the Carpathians. Thrust beyond the Carpathians, and extending from the Iron Gate to the upper affluents of the Pruth, the independent Rumanians occupy a country of most irregular shape, and separated into two distinct portions by the river Sereth and one of its tributaries, which join the most advanced spur of the Eastern Carpathians to the great bend of the Lower Danube. To the north of this boundary lies Moldavia, thus named after a tributary of the Sereth; to the south-west and west is Wallachia, or the "Plain of the Welsh," *i.e.* of the Latins. This plain, the *tzara Rumaneasca*,

Fig. 43.—The Rumanians.



or Roman-land proper, is intersected by numerous parallel water-courses, forming as many secondary boundaries, and the river Olto separates it into Great Wallachia to the east, and Little Wallachia to the west. The Danube forms the political boundary down to its delta. It is a wide and sinuous river; below the Iron Gate, lakes, forests, and swamps render access to its banks almost impossible in many places; and migratory nations and conquerors, instead of crossing it, as they could easily have done in Austria and Bavaria, rather sought to avoid it by seeking for a passage through the mountains to the north. The abrupt bend of the Lower Danube and its extensive swampy delta still further shielded the plains of Wallachia, and invaders not provided with vessels were thus turned to the north, in the direction of the Carpathians. The lowlands of Moldavia were protected, though in a less degree, by the rivers Dnieper, Bug, Dniester, and Pruth running parallel with each other.

But, in spite of these natural bulwarks, it remains matter for surprise, and proves the singular tenacity of the Rumanians, that they preserved their traditions, their language, and nationality, in spite of the numerous onslaughts from invaders of every race to which they were exposed. Ever since the retreat of the Roman legions, the peaceable cultivators of these plains were preyed upon so frequently by Goths, Huns, and Pecheneges, by Slavs, Bulgars, and Turks, that their extinction as a race appeared to be inevitable. But they have emerged from every deluge which threatened to destroy them, thanks, no doubt, to the superior culture for which they were indebted to their ancestors, and again claim a place amongst independent nations. They have fully justified their old proverb, which says, *Romun no pere !*—"the Roman perishes not."

The Transylvanian Alps lie within the territory of the Rumanians, who occupy both slopes. Their upper valleys, however, are but thinly inhabited, and we may travel for days without meeting with any habitations excepting the rude huts of shepherds. The political boundary traced along the crest of the mountains is merely an imaginary line, passing through the forest solitudes of vast extent. Excepting near the only high-road, and the paths which join Transylvania to the plains of Wallachia, these mountains remain in a state of nature. The chamois is still hunted there, and not long since even bisons were met with. The Tsigani penetrates these mountains in search of the brown or black bears which he exhibits in the villages. He places a jar filled with brandy and honey near the beast's haunt, and, as soon as the bear and his family have become helplessly intoxicated, they are seized and placed in chains.

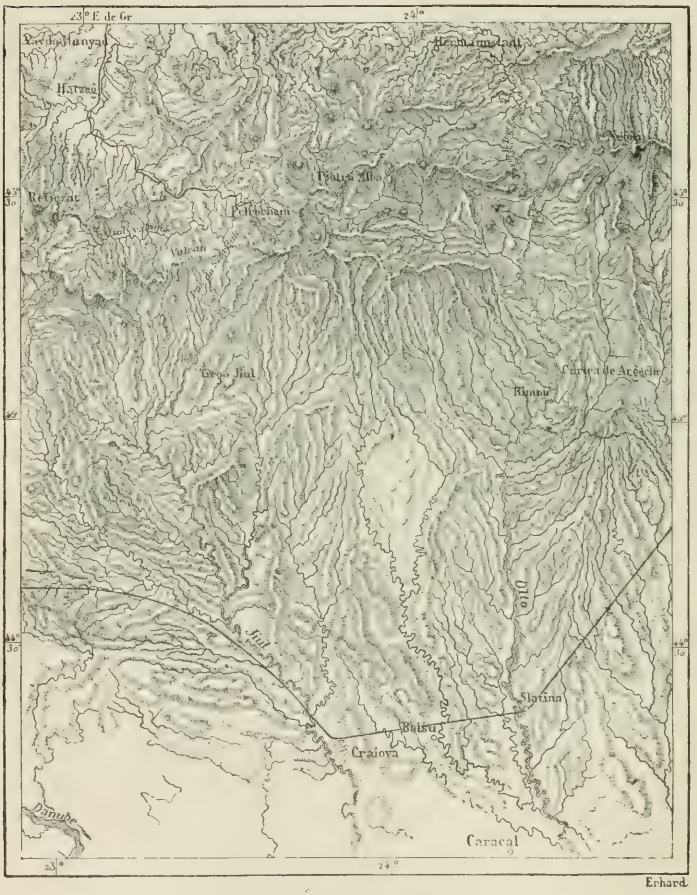
The physical configuration of Rumania is extremely simple. In Moldavia low ridges running parallel with the high mountain chain extend from the north-west to the south-east, being separated from each other by the valleys of the Bistritza, Moldava, and Sereth, and sinking down gradually into the plains of the Danube. In Wallachia the southern spurs of the Transylvanian Alps ramify with remarkable regularity, and the torrents which descend from them all run in the same direction. The rivers, whether they rise at the foot of the hills or traverse the entire width of the mountains, such as the Sil, Shil, or Jiul, the Olto or Aluta, and the Buseo, turn towards the east before their waters mingle with those of the Danube.

The slope of the hills is pretty uniform from the crest of the mountains to the plain of the Danube, and the zones of temperature and vegetation succeed each other with singular regularity. Summits covered with forests of conifers and birch, and clad with snow during winter, rise near the frontiers of Transylvania. These are succeeded by mountains of inferior height, where beeches and chestnuts predominate, and all the picturesque beauties of European forest scenery are met with. Lower still we come upon gentle hills, with groves of oaks and maples, and their sunny sides covered with vines. Finally, we enter the wide plains of the Danube, with their fruit trees, poplars, and willows. The zone lying between the high mountains and the plain abounds in localities rendered delightful by picturesque rocks, luxuriant and varied verdure, and limpid streams. In this "happy

Arcadia" we meet with most of the large monasteries, magnificent castles with domes and towers, standing in the midst of parks and gardens. As to the plains, they are no doubt barren and monotonous in many places, but the villagers, though their habitations are half buried in the ground, enjoy the magnificent

Fig. 44.—The Rivers Shil and Olto.

Scale 1 : 1,400,000



prospect of the blue mountains which bound the horizon. The most characteristic objects in these lowlands are the huge hay-ricks already figured upon Trajan's column at Rome.

The Rumanian campagna is a second Lombardy, not because of the high state of its agriculture, but because of the fertility of its soil, the beauty of the sky, and of the distant views. Unfortunately there are no mountain barriers to protect it against the cold north-easterly winds which predominate throughout the year. Extremes of cold and heat have to be encountered.* The vines have to be covered with earth to protect them against the colds of winter; and in South-eastern Wallachia, which is most exposed to the violence of the winds, it happens sometimes that herds of cattle and horses, flying before a snow-storm, precipitate themselves into the floods of the Danube. Several districts suffer from want of rain, and are veritable steppes. Amongst these are the plains of the Baragan, between the Danube and Yalomitza, where bustards abound, and a tree is not met with for miles.

Geologically we meet with a regular succession of formations, from the granite on the mountain summits to the alluvial deposits along the banks of the Danube. The rocks encountered on these southern slopes of the Carpathians are of the same kind as those found in Galicia on their northern slopes, and they yield the same mineral products, such as rock-salt, gypsum, lithographic stones, and petroleum. Tertiary strata predominate in the plains, but to the east of Ploiesti and Bucharest only quaternary deposits of clay and pebbles are met with, in which are found the bones of mammoths, elephants, and mastodons. The muddy rivers which traverse these plains have excavated themselves sinuous beds, and resemble large ditches.

The plain of Rumania, like that of Lombardy, is an ancient gulf of the sea filled up by the débris washed down from the mountain sides. But though the sea has retired, the Danube remains, pouring out vast volumes of water, and offering great advantages to navigation. At the famous defile of the Iron Gate, where this river enters the plain, its bed has a depth of 155 feet, its surface lies 66 feet above the level of the Black Sea, and its volume exceeds that of the combined rivers of Western Europe, from the Rhone to the Rhine. The Romans, in spite of this, had thrown a bridge across the river, immediately below the Iron Gate, which was justly looked upon as one of the wonders of the world. This work of architecture, which Apollodorus of Damas had erected in honour of Trajan, was pulled down by order of the Emperor Hadrian, who was anxious to save the expenses of the garrison required for its protection. There only remain now the two abutments, and when the waters are low the foundations of sixteen out of the twenty piers which supported the bridge may still be seen. A Roman tower, which has given name to the little town of Turnu Severin, marks the spot where the Romans first placed their foot upon the soil of Dacia. The passage from Servia to Rumania is as important as it was of yore, but modern industry has not yet replaced Trajan's bridge.

The Danube, like most rivers of our northern hemisphere, presses upon its right bank, and this accounts for the difference between its Wallachian and Bulgarian banks. The latter, gnawed by the floods, rises steeply into little hills and

* Mean temperature at Bucharest, 46° F.; maximum, 113° F.; minimum, – 22° F.; difference, 135° F.

terraces, whilst the former rises gently, and merges almost imperceptibly in the plains of Wallachia. Swamps, lakes, creeks, and the remains of ancient river beds form a riverine network, enclosing numerous islands and sand-banks. These channels are subject to continual change, and to the south of the Yalomitza may still be seen a line of swamps and lagoons, which marks the course of an ancient river no longer existing. The lowlands on the Wallachian side of the Danube are constantly increasing in extent, whilst Bulgaria continuously suffers losses of territory. The latter, however, is amply compensated for this by the salubrity of its soil and the fine sites for commercial emporiums which it offers. It is said that the beaver, which has been exterminated almost in every other part of Europe, is still common in these half-drowned lands of Wallachia.

At a distance of thirty-eight miles from the sea, in a straight line, the Danube strikes against the granitic heights of the Dobruja, and abruptly turns to the north, subsequently to spread out into a delta. In the course of this détour it receives its last tributaries of importance, viz. the Moldavian Sereth and the Pruth. Thirty miles below the mouth of the latter the Danube bifurcates. Its main branch, known as that of Kilia, conveys about two-thirds of the entire volume of its waters to the Black Sea, and forms the frontier between Dobruja and Russian Bessarabia. The southern branch, or that of Tulcha, flows entirely through Ruman territory. It separates into two branches, of which that of Sulina is the main artery of navigation.

The main branch of the river is of the utmost importance when considering the changes wrought upon the surface of the earth through aqueous agencies. Below Ismail it ramifies into a multitude of channels, which change continuously, new channels being excavated, whilst others become choked with alluvial deposits carried down by the floods. Twice the waters of the river are reunited into a single channel before they finally spread out into a secondary delta jutting into the Black Sea. The exterior development of this new land amounts to about twelve miles, and supposing the sea to be of a uniform depth of thirty-three feet, it would advance annually at the rate of 660 feet. Yet, in spite of this rapid increase, the coast, at the Kilia mouth, juts out far less to the east than it does in the southern portion of the delta, and we may conclude from this that the ancient gulf of the sea, now filled up by the alluvial deposits brought down by the Kilia branch, was far larger and deeper than those to the south.* On examining a map of the Danubian delta, it will be found that, by prolonging the coast-line of Bessarabia towards the south, it crosses the delta. This is the ancient coast. It rises above the half-drowned plains like an embankment, through which the branches of the river forced themselves a passage to the sea. The alluvium brought down by the Sulina and St. George's mouths has been spread over a vast plain lying outside this embankment, whilst that carried down through what is at present the main branch forms only a small archipelago of ill-defined islands

* Mean volume of the Danube (according to C. Hartley), 2,000,000 gallons per second; maximum volume, 6,160,000 gallons; mean volume of Kilia mouth, 1,276,000 gallons; mean of St. George's mouth, 572,000 gallons; mean of Sulina mouth, 176,000 gallons per second. Mean alluvial deposits of Danube, 2,119 cubic feet per annum.

beyond it. We may conclude from this that the latter is of more recent origin than the other arms.

In the course of its gradual encroachment upon the sea, the river has cut off several lakes of considerable extent. On the coast between the mouth of the Dniester and the delta of the Danube there are several lagoons, or *limans*, of inconsiderable depth, the water of which evaporates during the heat of summer, depositing a thin crust of salt. In their general configuration, the nature of the surrounding land, and parallelism of the rivers which flow into them, these sheets of water are very much like the lakes met with more to the west, as far as the mouth of the Pruth. These latter, however, are filled with fresh water, and the sandy barriers at

Fig. 45.—The Danube and Yalomitza.
Scale 1 : 1,413,000.

their lower ends separate them not from the Black Sea, but from the Danube. There can be no doubt that these lakes were anciently gulfs of the sea, similar in all respects to the lagoons still existing along the coast. The Danube, by converting its ancient gulf into a delta, separated them from the sea, and their saline water was replaced by fresh water carried down by the rivers. The existing saline lagoons will undergo the same metamorphosis, in proportion as the delta of the Danube gains upon the sea.

The plains of Wallachia were defended formerly by an ancient line of fortifications passing to the north of these Danubian lakes and lagoons, and known as "Trajan's Wall," like the ditches, walls, and entrenched camps in the Southern Dobruja. The inhabitants ascribe their construction to Cæsar, although they are of

much later date, having been erected by Trajan as a protection against the Visigoths. This ancient barrier of defence coincided pretty nearly with the political boundary between Russian and Rumanian Bessarabia, and extended probably to the west of the Pruth, across the whole of Moldavia and Wallachia. Vestiges of it still met with there are known as the "Road of the Avares." A second wall, still traceable between Leova and Bender, defended the approaches to the valley of the Danube.

In spite of the diverse races which have overrun, conquered, or devastated their territory, the inhabitants of Rumania, more fortunate than their neighbours, have preserved their unity of race and language. Wallachians and Moldavians form one people, and not only have they kept intact their national territory, but they have actually encroached upon the territories of their neighbours. Throughout Rumania, with the exception of the Dobruja, handed over to Rumania by the treaty recently concluded at Berlin, the inhabitants belonging to alien races are in the minority.

The origin of this Latin-speaking nation is still shrouded in mystery. Are they the descendants of Getæ and Latinised Dacians, or does the blood of Italian colonists brought thither by Trajan, of legionaries and Roman soldiers, predominate amongst them? To what extent have they become amalgamated with their neighbours, the Slavs and Illyrians? What share had the Celts in the formation of their nationality? Are the "Little" Wallachians, the "men with the eighty teeth,"—so called on account of their bravery,—the descendants of Celts? We cannot say with certainty, for men of learning like Shafarik and Miklosich differ on all these points. The vast plains at present inhabited by the Rumanians became a wilderness in the third century, when the Emperor Aurelian compelled their inhabitants to migrate to the right bank of the Danube. If it is true that the descendants of these emigrants ever returned to the seats of their ancestors, in the meantime occupied by Slavs, Magyars, and Pecheneges, when did they do so? Miklosich presumes that they did so towards the close of the fifth century; Roesler thinks in the fourteenth, although ancient chroniclers of the eleventh century mention Rumanians as dwelling in the Carpathians. Other authorities deny that there was any re-immigration; they maintain that the residue of the Latinised population sufficed for reconstituting the nationality. Thus much is certain, that this small people has increased wonderfully, and has become now the preponderating race on the Lower Danube and in Transylvania.

Even in the seventeenth century the language spoken by the Rumanians was treated as a rural dialect, and Slavonian was used in churches and courts of justice. At the present day, on the contrary, Rumanian patriots are anxious to purge their language of all Servian words, and of Greek and Turkish expressions introduced during the dominion of the Osmanli. The "Romans" of the Danube are endeavouring to polish their tongue, so that it may rank with Italian and French. They have abandoned the Russian characters, and their vocabulary is being continually enriched by new words derived from the Latin. The idiom spoken in the towns, which was the most impure

WALLACHIANS (VALAKHS).

formerly, in consequence of the influx of strangers, has now become more Latin than that spoken in the country. There are, however, about two hundred words not traceable to any known tongue, and these are supposed to be a remnant of the ancient Dacian spoken at the period of the Roman invasion. The Wallachian differs, moreover, from the Latin tongues of Western Europe by always placing the article and the demonstrative pronoun after the noun. The same rule obtains in Albanian and Bulgarian, and Miklosich is probably right when he looks upon this as a feature of the ancient language of the aborigines.

These niceties, however, are altogether unnoticed by the mass of the people. The Rumanian peasant is proud of the ancient conquerors of his country, and looks upon himself as the descendant of the patricians of Rome. Several of his customs, at the birth of children, betrothals, or burials, recall those observed by the Romans, and the dance of the *Calushares*, it is said, may be traced back to the earliest Italian settlers. The Wallachian is fond of talking about Father Trajan, to whom he attributes all those feats which in other countries are associated with Hercules, Fingal, or Ossian. Many a mountain valley has been rent asunder by Trajan's powerful hand; and the avalanches descending from the hills are spoken of as Trajan's thunder. The Rumanian completely ignores Getæ, Dacians, or Goths, though in the hills we still meet with tall men having blue eyes and long flaxen hair, who are probably descended from the aboriginal inhabitants of the country.

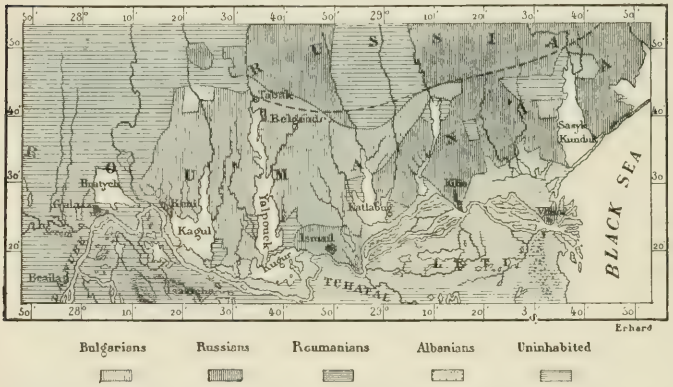
The Rumanians have generally fine sunburnt features, fair hair, expressive eyes, a mouth finely shaped, and beautiful teeth. They allow their hair to grow long, and sometimes even prefer to expatriate themselves to sacrificing it to the exigencies of military service. They exhibit grace in all their movements, are indefatigable on the march, and support the heaviest labour without complaining. Even the Wallachian herdsman, with his sheepskin cap, or *cashula*, his wide leather belt used as a pocket, a sheepskin thrown over his shoulders, and drawers which recall those of the Dacians sculptured on Trajan's Column, is noble in his bearing. In the large towns, where much intermixture has taken place with Greeks, Southern Russians, and Magyars, the brown complexion predominates. The Rumanian women are grace itself. They always charm us by taste and neatness, whether they have adopted a modern dress or still patronise the national costume, consisting of an embroidered chemisette, a floating vest, a party-coloured apron, a golden net, and golden sequins placed in the hair. These external advantages are combined in the Rumanian with quickness of apprehension, a gay spirit, and the gift of repartee, which entitle them to be called the Parisians of the Orient.

In the midst of this homogeneous Rumanian population we meet with Bulgarian colonists, whose number has increased recently in consequence of the persecutions of Turks and Greeks. The character of the Bulgarians born in the country has undergone considerable modifications. They are at present the most industrious tillers of the soil, and in the vicinity of large towns they occupy themselves principally with horticulture. Many of these Bulgarians live in that

portion of Bulgaria known as the Dobruja, which the treaty of Berlin has assigned to Rumania in exchange for the Bessarabian portion of Moldavia, which has been restored to Russia. The exchange, by no means a voluntary one, can hardly be said to be disadvantageous to Rumania, which has now acquired the whole of the delta of the Danube, inclusive of the much-coveted Sulina branch, which is kept open as a navigable highway by an international European commission, carrying its own flag, and levying tolls upon ships to defray the expenses incurred by it. The population of the *Budzak*, or Southern Bessarabia, as shown on our map, is most motley in its character. That of the Dobruja is no less so. Rumanians are met with only in the towns and along the Danube; the Bulgarians are the principal cultivators of the soil; but the bulk of the population consists of Nogai Tartars, who came into the country after the Crimean war. The Bulgarians were forced to surrender to these unwelcome intruders their best fields, and to build

Fig. 46.—Ethnological Map of Moldavian Bessarabia (ceded to Russia, 1878).

Scale 1 : 1,500,000.



houses for them; but the Tartars, in spite of the solicitude exhibited on their behalf, did not prosper, and recent events may have induced many amongst them to depart for more congenial regions.

The Russians met with in the towns of Rumania are generally engaged in commerce, and enjoy a high reputation for honesty. Most of them belong to the old sect of the *Lipovani*, and fled from Russia about a century ago to escape religious persecution. They nearly all speak Rumanian. Others belong to the sect of the *Skoptzi*, or "mutilated," which is said to recruit itself by stealing children. These Skoptzi are recognised by their portliness and smooth faces, and at Bucharest they are reputed to be excellent coachmen.

Magyar Szeklers from Transylvania, known in the country as *Changhei*, are the only other foreign element of the population occupying distinct settlements. These Changhei, who first came into the country when the Kings of Hungary were masters of the valley of the Sereth, are gradually becoming Rumanians

in dress and language, and would have become so long ago were they not Roman Catholics, whilst the people among whom they live are Greeks. They are joined annually by a few compatriots from Transylvania, attracted by the mild climate and the fertility of the soil. In spring and autumn large bands of Hungarian reapers and labourers descend into the plains of Moldavia.

The Hellenic element was strongly represented last century, when the government of the country was farmed out by the Sultan to Greek merchants of Constantinople. At the present time the Greeks are not numerous—not exceeding, perhaps, 10,000 souls, even if we include amongst them Hellenized Zinzares—but they occupy influential positions as managers of estates or merchants, and the export of corn is almost exclusively in their hands. Traces of the ancient government of these Phanariotes still exist in the language of the country, and in the relationships resulting from intermarriages between seignorial families. Far more numerous than these Greeks, and of greater importance, are the members of those homeless nations—the Jews and Tsigani (or gipsies). A few Spanish Jews are met with in the large towns, but the majority are "German" Jews, who have come hither from Poland, Little Russia, Galicia, and Hungary. As publicans and middlemen they come into close contact with the poor people, and they are universally detested, not on account of their religion, but because of the wonderful skill with which they manage to secure the savings of the people. Imaginary crimes of all kinds are attributed to them, and they have repeatedly been exposed to maltreatment on the frivolous charge of having eaten little children at their Passover. The Rumanians, however, can hardly manage without these detested Jews, and their laws, by preventing the Jews from acquiring land, fortify their commercial monopoly. The Jews, if certain estimates may be credited, constitute one-fifth of the total population of Moldavia. The Armenians, the other great commercial people of the Orient, are represented by a few flourishing colonies, more especially in Moldavia. These Haikanes are the descendants of immigrants who settled in the country at various epochs between the eleventh and seventeenth centuries. They live amongst themselves, and, though not exactly liked by the people, they have known how to avoid becoming objects of hatred. A few Armenians from Constantinople, and speaking Turkish, are met with on the Lower Danube.

The Tsigani, or gipsies, so despised formerly, become merged by degrees in the rest of the population. Not long ago they were slaves, the property of the State, of boyards, or monasteries. They led a wandering life—working, trafficking, or stealing for the benefit of their masters. They were divided into castes, the principal of which were the *lingurari*, or spoon-makers; *ursari*, or bear-leaders; *ferrari*, or smiths; *aurari*, or collectors of gold dust; and *lautari*, or musicians. These latter were the most polished of all, and were employed to celebrate the glory and the virtues of the boyards. They are now the minstrels of the country and the musicians of the town. Very few in number are the *Netotzi*, a degraded caste who live in woods or tents, subsist upon the foulest food, and do not bury their dead. The Tsigani were assimilated in 1837 with the peasantry, and since

their emancipation nearly all of them lead a settled life, cultivating the soil with great care, or exercising some handicraft. The fusion between Tsigani and Rumanians is making rapid progress, for both races have the same religion and speak the same language. Intermarriages between the two are frequent, and in a time not far off the Tsigani of Rumania will be a thing of the past. They are supposed still to number between 100,000 and 300,000 souls.*

The Rumanian nation is still in a state of transition from a feudal to a modern epoch. The revolution of 1848 shook the ancient system to its foundation, but did not destroy it. As recently as 1856 the peasants were attached to the soil. They had no rights, but were at the mercy of the boyards and monasteries whose soil they were doomed to till, and lived in miserable hovels. The whole of the country and its inhabitants belonged to five or six thousand boyards, who were either the descendants of the ancient "braves," or had purchased their patents of nobility. Most of these boyards were only small proprietors, and nearly the whole of the land belonged to seventy feudatories in Wallachia, and three hundred in Moldavia.

This state of affairs led to the most frightful demoralisation amongst masters and serfs, and even the good qualities of the Rumanian—his energy, his generosity, and friendliness—were turned into evil. The nobles lived far away from their estates, spending the income forwarded by their Greek bailiffs in debauchery and gambling. The peasants worked but little, for they had no share in the produce of the soil; they were mistrustful and full of deceit, as are all slaves; they were ignorant and superstitious, for they depended for their education upon illiterate and fanatical priests. Their *popes* were magicians, and cured maladies by incantations and holy philtres. As to the monks, some of them were rich proprietors, as rapacious as the temporal lords; others lived on alms, having exchanged a life of slavery for mendicity.

Not long ago the Rumanians, deprived of all education except that supplied by their *doinas*, or ancient songs, were lost almost in mediæval darkness. Even now some of the ancient customs of their ancestors survive in the rural districts. Funerals are attended by hired weeping women, whose shrieks accompany the farewell of relatives. Into the coffin they place a stick upon which to rest when crossing the Jordan, a piece of cloth to serve as a garment, and a coin as a bribe to St. Peter for opening the gate of heaven. Nor are wine and bread forgotten for the journey. Red-haired people are suspected of returning to earth in the guise of a dog, a frog, or a flea, and to penetrate into houses in order to suck the blood of good-looking young girls. In their case it is as well to close the coffin-lid tightly, or, still better, to pierce the throat of the defunct with a stick.

The peasantry will doubtless no longer be haunted by these hallucinations, for the

* Approximate population of Rumania, 4,926,000 souls, of whom 3,090,000 were in Wallachia, 1,836,000 in Moldavia, and 221,000 in the Dobruja. There were 4,288,000 Rumanians, 127,000 Turks and Tartars, 70,000 Bulgarians, 15,000 Russians, 50,000 Magyars, 131,000 Tsigani (gipsies), 400,000 Jews, 9,000 Armenians, and 56,000 foreigners (30,000 Austrians, 15,000 Greeks, 5,000 Germans, 1,500 French)

moral and intellectual progress of the nation has kept pace with its material prosperity since the peasant has cultivated his own land. Officially made a freeman in 1856, but held for several years afterwards in a kind of limited bondage, the peasant now owns at least a portion of the land. By a law passed in 1862, each head of a family is entitled to a plot of land from seven to sixty-seven acres in extent, and ever since that time the peasants have gained immensely in self-respect. His land, though still cultivated with the ancient Roman plough, and deprived of manure, produces immense quantities of cereals, the sale of which brings wealth into the country and encourages progress. Rumania is now one of the great corn-exporting countries of Europe, and in favourable years, when the crops are neither eaten up by locusts nor destroyed by frosts, its exports exceed those of Hungary. In less than ten years the export of wheat, maize, barley, and oats has doubled, and the sum annually realised varies between £4,000,000 and £8,000,000 sterling.

Unfortunately the peasants eat but little of the corn they grow. They are content with the maize, from which they prepare their *mamaligo* and the detestable spirits which cheer their hearts on a hundred and ninety-four annual fête days. The cultivation of the vine, which was altogether neglected formerly, is likewise making progress, and the produce of the foot-hills of the Carpathians is justly esteemed. The time is past now when "Wallachian" and "herdsman" were synonyms throughout the East. Still, nearly one-fourth of the area of the country remains uncultivated, and the soil is allowed to lie fallow every third year. Moldavia is better cultivated, upon the whole, than Wallachia, and this is principally owing to the fact of the Moldavian boyards residing upon their estates, and taking a pride in their management. Progress, however, is apparent throughout the country, and there is hardly a large estate without its steam threshing-machine. Even the small proprietors are gradually introducing improved methods of cultivation, and in many villages they have formed co-operative associations for the cultivation of extensive tracts of country.*

Rumania is essentially an agricultural country. The ores of the Carpathians are not utilised, for there are no roads which give access to them. The petroleum wells only supplied 3,810,000 gallons in 1873. Four of the principal salt-works are carried on by Government, partly with the aid of convict labour, and yield annually 80,000 tons of salt. The fisheries are of some importance. The inhabitants on the Lower Danube salt the fish which abound in the river and the neighbouring lakes, and prepare caviare from sturgeons. There are no manufactories excepting near the large towns, and the country is noted only for its carpets, embroidered cloth and leather, and pottery. The housewives are famed for their confectionery.

Commerce is annually on the increase.† Its only outlet in former times was

* Of the area of Moldo-Wallachia 6,000,000 acres are corn-lands, 600,000 acres produce wine, tobacco, &c., 5,000,000 consist of forests, 9,000,000 of pastures and meadows, and 8,000,000 are uncultivated. In 1874 there were 600,000 horses, 2,900,000 head of cattle, 100,000 buffaloes, 5,000,000 sheep, 1,200,000 pigs, and 500,000 goats.

† Exports, average of 1865—75, £6,700,000; imports, £4,300,000.

the Danube. Nearly the whole produce of the country was carried to Galatz, at the bend of the river, upon which the principal routes of the country converge. For many years to come the Danube will remain the great commercial highway of the country; the Pruth, too, is navigable for small steamers as far as Sculeni, to the north of Yassy; whilst the numerous rivers descending from the Carpathians will always prove useful for the conveyance of timber. New outlets have been created by the construction of railways. Rumania is now joined to the railway systems of Austria and Hungary, and the proposed bridge across the Danube will place it in direct communication with Varna, on the Black Sea. The level nature of the country facilitates the construction of railways, but its inhabitants look upon their extension with a feeling of apprehension, for they fancy that a commercial invasion may bring in its train a military one.*

The acquisition of the Dobruja has provided the country with another outlet for its produce, for a railway connects Chernavoda, on the Danube, with the port of Kustenje, on the Black Sea, from which more than half a million quarters of wheat are exported annually, and at which the mail-boats from Constantinople call regularly. Formerly, whilst the delta of the Danube was in the hands of the Turks, Rumania had no direct access to the Black Sea, except by means of small vessels, for the mouth of the northern or Kilda branch of the Danube is obstructed by a bar. French engineers proposed to overcome this difficulty by constructing an artificial harbour at some distance to the north, and connecting it with the river by means of an artificial canal. But no necessity exists now for so costly an enterprise, since Rumania has been placed in possession of the Sulina mouth of the Danube. The town at the mouth of that branch has sprung into existence since 1850, at which time only a lighthouse and a few huts of fishermen occupied its site. It is now one of the busiest grain ports of the Black Sea, frequented annually by 2,200 vessels, amongst which those sailing under the British flag occupy the foremost rank. The depth of the bar averages 20 feet.

Bucharest (or Bucuresci, pron. Bukureshti), the capital of Wallachia and of the whole of Rumania, already numbers amongst the great cities of Europe. Next to Constantinople and Buda-Pest, it is the most populous town of South-eastern Europe, and its inhabitants fondly speak of it as the "Paris of the Orient." The town not very long since was hardly more than a collection of villages, very picturesque from a distance on account of numerous towers and glittering domes rising above the surrounding verdure, but very unpleasant within. But Bucharest has been transformed rapidly with the increasing wealth of its inhabitants. It may boast now of wide and clean streets, bounded by fine houses, of public squares full of animation, and of well-kept parks, and fully deserves now its sobriquet of the "joyful city."

Yassy (Jasi, or Yashi), which became the capital of Moldavia when Suchova was annexed by Austria, occupies a position far less central than does Bucharest, but the fertility of the surrounding country, the proximity of the navigable

* Railroads, 1,800 miles; high-roads, 2,650 miles; telegraphs, 2,500 miles; steamers on the Danube, 29, of 7,620 tons burden.

Pruth and of Russia, with which it maintains a brisk commerce, and its position on the high-road joining the Baltic to the Black Sea, have caused it to increase rapidly in population. It is a flourishing town now, though no longer the seat of an independent government. Built upon the foot-hills of the Carpathians, the city presents itself magnificently from afar, and its exterior is not belied by its finer quarters. Jews, Armenians, Russians, Tsigani, Tartars, and Magyars are numerously represented amongst its population, which is semi-Oriental in type. We may almost fancy ourselves standing upon the threshold of Asia.

Fig. 47.—View of Bucharest.

The church of the Three Saints is distinguished for its originality, and is a masterpiece of ornamentation in the Moorish style.

All the other towns of Rumania are indebted for their importance to their position on commercial high-roads. Botosani, in Northern Moldavia, lies on the road to Galicia and Poland, and the same may be said of Falticeni, whose international fairs are always well attended. Commerce causes the towns on the Danube to flourish. Sulina, at the mouth of the river, has already been mentioned; Tulcha, at the head of the delta, exports corn, timber, and salt fish; Galatz, said to be an ancient colony of the Galatians, is now the

most important commercial emporium on the Lower Danube, and seat of the European commissioners for its regulation; Braila, a poor village as long as the Turks held it, but now important on account of its grain trade, and the literary centre of the Bulgarians. All these towns, though situated on the banks of the Danube, may be looked upon almost as ports of the Black Sea, through which the produce of the country, and especially its grain, finds an outlet to foreign markets. Giurgiu (Jurjevo) is the port of Bucharest on the Danube; Turnu-Severinu is the gateway of Wallachia, below the great narrows of the river; Craiova, Pitesci, Ploiesti, Buzeu, and Focsani form the terminal points of the roads descending from the high valleys of Transylvania. Alecsandria, a town recently built in the centre of the plain which extends from Bucharest to the Olto, has become a depôt for agricultural produce.

Formerly, when incessant wars rendered a strong strategical position of greater importance than commercial advantages, the capital of the country was established in the very heart of the Carpathians. In the thirteenth century it was at Campu-Lungu, in the midst of the mountains, and subsequently it was transferred to Curtea d'Argesia, founded by Prince Negoze Bessaraba in the beginning of the sixteenth century. Of this ancient capital there remain now only a monastery and a wonderful church: the walls, cornices, and towers are covered with sculptures, like the work of a jeweller. Targu-Vestea, or Tirgovist, on the Yalomitza, was the third capital, but of the fine palace built there by the *domni* there remain now only blackened walls.*

Rumania includes the two ancient principalities of Wallachia and Moldavia, and the province of the Dobruja. It formerly paid a tribute to the Porte, but its independence has been recognised by the treaty of Berlin. The country has placed a member of the Hohenzollern family at the head of the State. The constitution of 1866 confers upon this prince the right of appointing all public functionaries and the officers of the army, of coining money, and of pardoning. All laws require his signature before they can be enforced. He enjoys a civil list of £48,000.

The legislative powers are vested in two chambers, the members of which are elected by a process designed to favour the interests of the rich. All Rumanians above twenty-one years of age, except servants in receipt of wages, are inscribed in the electoral lists. They are divided into four "colleges," or classes, having widely different privileges. The first college includes all those electors of a district whose income from landed property amounts to £132 a year; electors having an income of between £44 and £132 form a second college; merchants and

* Number of inhabitants of the principal towns of Rumania (official spelling; vulgar or phonetic spelling in parenthesis):—

Wallachia.—Bucuresci (Bucharest), 221,800; Ploiesti (Ploeshti), 33,000; Braila, 28,270; Craiova, 22,764; Giurgiu (Jurjevo, or Giurgevo), 20,866; Buzeu (Busau), 11,100; Alecsandria, 11,000; Campulung, 9,900; Pitesci (Piteshti), 8,500; Caracalu, 8,600.

Moldavia.—Jasi (Yassy), 90,000; Galati (Galatz), 80,000; Botosani, 39,900; Barladu (Byrlat), 26,600; Focsani, 20,300; Peatra, 20,000; Husi, 18,500; Roman, 16,900; Falticeni, 15,000; Bacau, 13,000; Dorohoi, 10,000.

Dobruja.—Tulcha, 19,000; Mejije, 32,000; Babadagh, 4,000; Isakcha, 4,000; Sulina, 4,000.

tradesmen of the towns paying a tax of 23*s.* annually. Government pensioners, half-pay officers, professors and graduates of universities, form the third college; and the remainder of the electors belong to the fourth college. The first two colleges elect a deputy each for their district; the third college elects from one to six deputies for each town, according to its size; the fourth college elects delegates by whom the representatives are chosen.

The Senate represents more especially the large landed proprietors. Senators must have an income of £352, and are elected by the landed proprietors whose income amounts to at least £132 a year. The universities of Bucharest and Yassy are represented by a senator each, elected by the professors, and the crown prince, the metropolitan, and the diocesan bishops are *ex-officio* members of the Senate. Senators are elected for eight, and deputies for four years.

The Rumanian constitution grants all those rights and privileges usually set forth in documents of that kind. The right of meeting is guaranteed; there is liberty of the press; the municipal officers and mayors are elected, but the Prince may intervene in the case of towns inhabited by more than a thousand families; the punishment of death is abolished, except in time of war; and education is free and compulsory "wherever there are schools." There is liberty of religion, though there is a State Church, and Christians alone can be naturalised. No marriage is legal unless it has been consecrated by a priest. The Rumanian Church, as far as dogmas are concerned, is that of the Greeks, but it is altogether independent of the Greek patriarch residing at Constantinople, and is governed by its own Synod. Most of the monasteries have been secularised.

The country is divided into four judicial districts, each having a court of appeal, whilst a supreme court sits at Bucharest. The French codes, slightly modified, were introduced in 1865.

The army is partly modelled upon that of Prussia. All citizens are called upon to serve sixteen years, eight of which are passed in the standing army or its reserve, and eight in the militia. The National Guard includes all men up to fifty not belonging to either of the other categories. By calling out all its men, Rumania can easily send an army of 100,000 men into the field. There are likewise a few gunboats on the Danube.

The finances of Rumania are in a more satisfactory condition than those of most other states of Europe. The Government has certainly been living upon loans, for which eight per cent. has to be paid, and nearly the whole of the annual income is spent upon the payment of interest, the army, and the revenue services. The credit of Rumania is, however, good, for the loans are secured upon vast domains, the property of the secularised monasteries, several thousand acres of which are sold every year. The sale of salt and the manufacture of tobacco are Government monopolies.*

* Average annual expenditure, 1871—76, £5,650,000; public debt, £19,500,000, including £13,000,000 expended upon railways; estimated value of the domains, £20,000,000.

SERVIA AND MONTENEGRO.*

Servia.

SERVIA, like Rumania, was until recently a semi-independent state, paying a tribute of £25,000 a year to the Porte, and submitting to the presence of a Turkish garrison at Mali-Zvornik, on the Bosnian frontier. But even these vestiges of ancient oppression irritated the national pride to an inconceivable degree, and the moment when a blow might be struck on behalf of Servia and the neighbouring countries inhabited by Slavs still groaning under the Turkish yoke was looked forward to with impatience. The blow has been struck, and, thanks to the forbearance of the powers and the support afforded by Russia, Servia has issued from the struggle with an increase of territory.

Servia, within its actual limits, includes only a small portion of the northern slope of the mountains rising in the centre of the Balkan peninsula. It is separated from Austro-Hungary by the Save and the Danube, but no natural boundary divides it from Turkey; and the valleys of the Morava, the Drina, and the Timok, the former in the centre, the others on the eastern and western frontiers of the country, afford easy access to a foreign invader. The difficulties to be surmounted by the latter would begin only after he had entered the vast forests, the narrow valleys, and unfathomable *klisuras* amongst the mountains.

The only plains of any extent are on the banks of the Save. Everywhere else the country is hilly, rocky, or mountainous. The most prominent mountain range is that which extends from the "Iron Gate" and the defile of Kasan, on the Danube, through Eastern Servia, and forms a marked continuation of the Transylvanian Alps, with which it agrees in geological structure. In the northern portion of these Servian Carpathians, in the angle formed by the confluence of the Danube and Morava, where masses of porphyry have burst through limestones and schists, we find ourselves in the great mineral region of Servia. Copper,

* Authorities:—Kanitz, "Serbien;" Ubicini, "Les Serbes de Turquie;" Cyprien Robert, "Les Slaves de Turquie;" Louis Léger, "Le Monde Slave;" Lejean, "Visite au Montenegro."

iron, and lead ores are being worked here, especially at Maidanpek and Kuchaina, but the old zinc and silver mines have been abandoned. The valley of the Timok, in the southern portion of this mountain range, is likewise rich in minerals, and gold dust is collected from the sand of the river. There are few valleys which can rival that of the Timok in beauty and fertility, and the basin of Knyashevatz, where the head-streams of the river unite, is more especially distinguished by its rural beauty, sparkling rivulets flowing through the meadows, vines covering the hills, and forests the surrounding mountains. A narrow defile immediately below this basin leads into the valley of Zaichar, near which, at Gamzigrad, there still exist ruins of a Roman fortress, its walls and towers of porphyry in a capital state of preservation. Looking northward from this position we perceive the Stol (3,638 feet), whilst in the south-west there rises a huge pyramid of chalk, which might almost be mistaken for the work of human hands. This is the Rtan (4,943 feet), at whose foot burst forth the hot springs of Banya, the most frequented and efficacious of all Servia.

The valleys of the Morava and of its main tributary, the Bulgarian Morava, divide Servia into two parts of unequal extent. The valley of the Morava forms a natural highway between the Danube and the interior of Turkey, passing through Nish, Leskovatz, and Vranya. A Roman road formerly led along it. Krushevatz, the ancient capital of the Servian empire, occupies the centre of a plain in the valley of the Servian Morava, not far above the defile of Stalaj, where the two Moravas unite at the foot of a promontory crowned with ruins. The remains of the palace of the Servian tsar are still shown there, and it is stated that Krushevatz, at the height of Servian power, had a circumference of three leagues. It is only a poor village now.

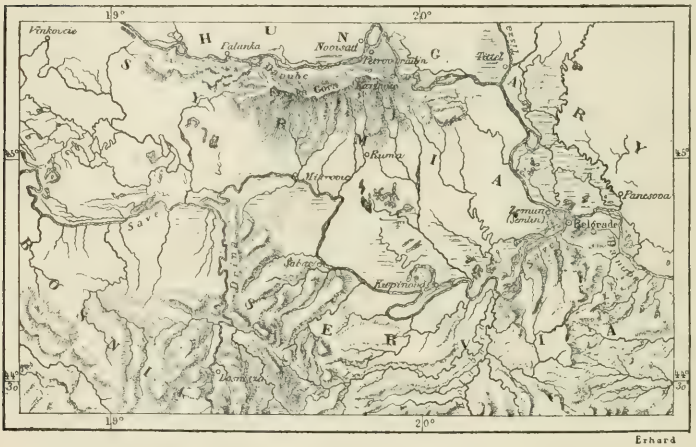
The wildest mountain masses of Servia rise between the two Moravas, their culminating point being the Kopaonik (6,710 feet), which attains a greater height than any other summit between the Save and the Balkans. A wide prospect of incomparable beauty opens from its base and rocky summit, extending southwards over plains and mountains to the pinnacles of the Skhar and the pyramidal Dormitor. In itself, however, the Kopaonik is quite devoid of beauty, and where its slopes have been deprived of the forests which once covered them, the bare rocks of serpentine present a picture of utter desolation. Its valleys are far from fertile, their inhabitants are sulky and poor, and many amongst them suffer from goitre.

The mountains which extend to the north of the Kopaonik, along both banks of the Ibar, are for the most part still clothed with oaks, beeches, and conifers. The broad valley of the Servian Morava, rivalling in fertility the plains of Lombardy, penetrates into these mountain masses. But they rise again to the north of that river, attaining a height of 3,622 feet in the mountain mass of Rudnik. Cretaceous rocks predominate, frequently surmounted by granitic peaks. The valleys are narrow and tortuous. This is the famous Sumadia, or "forest region" of Servia, which during the rule of the Turks offered a safe asylum to the persecuted rayas, and in the war of independence became the

citadel of Servian liberty. The little town of Kraguyevatz, in one of its narrow valleys, was chosen to be the seat of government, and it still retains a gun foundry, supplied with coal from the basin of Chupriya. A secluded capital like this may have suited a people constantly engaged in war, but when Servia entered upon a career of progress the seat of government was removed to Belgrad. This city—the Beográd, or "white town," of the Servians, the *Singidunum* of the Romans, and the *Alba Græca* of the Middle Ages—is delightfully situated upon a hill near the confluence of the Danube and Save, and overlooks the swampy plains of Syrmia. Belgrad, from its favourable geographical situation, has become a place of much trade, and is likewise an important strategical position.

To the west of Belgrad we merely meet with hills, and with the fertile plains

Fig. 48.—Confluence of the Danube and Save.
Scale 1 : 1,420,000.



watered by the Kolubara. It is only towards the south-west, on nearing the Drina, that we again find ourselves in the midst of calcareous mountains, attaining a height of 3,630 feet, and connected with spurs of the Kopaonik in the south. This is one of the most picturesque portions of the country. Ruins of houses and fortresses abound, amongst which those of Ushitza are the most extensive. These fortresses have, however, failed to protect the country, and no portion of Servia has more frequently been laid waste by ruthless invaders.

In former times Servia could boast of some of the most extensive oak forest in Europe. "To kill a tree is to kill a Servian," says an ancient proverb, dating probably from the time when the forests afforded shelter to the oppressed rayas. This proverb, unfortunately, is no longer acted upon. In many parts of the country the forests have disappeared, and the naked rock obtrudes itself as in

BELGRAD.

Dalmatia and Carniola. A peasant in need of a branch cuts down an entire tree, and the herdsmen are not content to feed their bivouac fires with dry sticks, but must needs have an oak. The greatest enemies of the forests, next to herdsmen, are goats and hogs, the former browsing upon small trees and leaves, the latter laying bare the roots. An old tree, thrown down by a tempest or sacrificed to the woodman's axe, is not replaced. Laws for the protection of the forests have certainly been passed, but they are not enforced, and the wood required for fuel has to be imported, in many instances, from Bosnia. The destruction of the forests has naturally been attended by a deterioration of the climate. Mr. Edward Brown, who travelled in Servia in the seventeenth century, tells us that the Morava was then navigable for the greater part of its course; but at the present time, owing to its irregularities, it is no longer available as a navigable channel.

Servia, by despoiling the mountains of great forests, has got rid of the wild animals which formerly infested them. Wolves, bears, wild boars, previously so numerous, have almost disappeared, and those still met with occasionally are supposed to come from the forests of Syrmia, crossing the frozen Save in winter. The fauna and flora of Servia are gradually losing their original features. The introduction of the domesticated animals and cultivated plants from Austria has given to Servia a South German aspect. Nor does the climate much differ from some parts of Southern Germany. Servia, though under the same latitude as Tuscany, rejoices by no means in an Italian climate. The Dalmatian or Bosnian mountain ramparts shut out the vivifying south-westerly winds, whilst the dry and cold winds from the steppes of Russia have free access over the plains of Wallachia. Strangers do not readily acclimatise themselves, owing to abrupt changes of temperature.*

Servia includes within its limits but a small proportion of all the Servians of Eastern Europe, but its inhabitants are probably not far wrong when they look upon themselves as the purest representatives of their race. They are, as a rule, tall, vigorous, with broad shoulders and an erect head. Their features are marked, the nose straight and often aquiline, and the cheek-bones a trifle prominent; the hair is abundant and rarely black, the eyes are piercing and cold, and a well-cultivated moustache imparts a military air to the men. The women, without being good-looking, have a noble presence, and their semi-oriental costume is distinguished by an admirable harmony of colours. Even in the towns, where French fashions carry the day, Servian ladies occasionally wear the national dress, consisting of a red vest, a belt and chemisette embroidered with pearls, strings of sequins, and a little fez stuck jauntily upon the head.

Unfortunately the custom of the country requires that a Servian woman should have an abundance of black hair and a dazzling white complexion. Paint, dyes, and false tresses are universal in town and country. Even in the most remote villages the peasant women dye their hair and paint their cheeks, lips,

* Mean temperature at Belgrad, 48° F.: extremes, 106° and 3°; range, 103° F.

and eyebrows, frequently making use of poisonous substances injurious to health. Rich country-people are, moreover, in the habit of making an exhibition of their wealth by means of their clothes, which they overload with gold and silver ornaments and gewgaws of every kind. In some districts brides and young women wear a most extraordinary head-dress, consisting of an enormous crescent of cardboard, to which are attached nosegays, leaves, peacock feathers, and artificial roses with silver petals. This heavy head-dress may symbolize the "burdens of matrimony;" it certainly exposes the wearer to great inconvenience.

The Servians are honourably distinguished amongst the people of the East by the nobility of their character, their dignified bearing, and, in spite of recent events, incontestable bravery. For centuries they resisted oppression, and, notwithstanding their isolation and poverty, they conquered their independence in the beginning of this century. They are said to be idle and suspicious—qualities which their former servitude accounts for—but at the same time honest and truthful. It is difficult to cheat them, but they themselves never cheat. Equals when under the dominion of the Turks, they are equals still. "There are no nobles amongst us," they say, "for we are all nobles." In their clear and sonorous language, so well suited to oratory, they fraternally address each other in the second person singular. Even prisoners are looked upon as brothers, and it is customary to permit a condemned criminal to visit his family on his giving his word of honour to return to prison.

The ties of family and friendship are a great power in Servia. It frequently happens that young men who have learnt to like each other take an oath of fraternal friendship, in the manner of the brothers in arms of Scythia, and this fraternity of heart is more sacred to them than that of blood. It is a remarkable fact, and one which speaks favourably for the high moral tone of the Servians, that their deep family affections and friendships do not lead to incessant acts of retaliation and vengeance, as amongst their neighbours the Albanians. The Servian is brave; he is always armed, but he is also peaceable, and does not demand blood for blood. Still, like other men, he is not perfect. As an agriculturist he follows the more obsolete routine. He is ignorant and superstitious. The peasants firmly believe in vampires, sorcerers, and magicians, and, in order to guard against their evil influences, they rub themselves with garlic on Christmas-eve.

Land is held by families in common, as amongst the other Slavs of the South. The ancient *zadruga*, such as it existed in the Middle Ages, is still preserved, and has never been interfered with by Roman or German laws, as in Dalmatia or Slavonia. On the contrary, the law of Servia protects this ancient form of tenure, and, in cases of a disputed will, relatives by adoption take precedence of those by blood. Servian patriots are desirous to see these ancient customs respected, and the members of the *Skupshtina*, or parliament, have never attacked this common proprietorship in the soil, for they look upon it as one of the surest safeguards against pauperism. Servia offers the best opportunity for studying agricultural

communities of this kind. Nowhere else are the features of family life equally delightful. The heavy day's work is followed by an evening devoted to pleasure. The children gather round their parents to listen to the warlike legends of old, or the young men sing, accompanying themselves upon the *gusla*. All those belonging to the association are looked upon as members of the family. The *staryeshina*, or head of the community, has charge of the education of the children, whom he is required to bring up as "good and honest citizens, useful to their fatherland." Yet, in spite of all these advantages, the *zadrugas* decrease from year to year. The demands of commerce and industry interfere with their accustomed routine, and they will hardly survive much longer in their present form.

A great portion of Eastern Servia has been occupied by Wallachians, who were invited to the country after the war of independence, when vast districts had been depopulated. These new settlers, being more prolific than their neighbours, gradually gain upon the Servians, and already some of their colonies are met with on the western bank of the Morava. Many Servian villages have become Wallachian as far as language can make them so. It is a strange fact that these Rumanian colonists should prosper in Servia, whilst Servian colonists from Hungary and Slavonia do not.

Zinzares, or Southern Wallachians, are met with in most towns, where they work as masons, carpenters, and bricklayers.

Bulgarians occupy the upper valleys of the Timok and Morava, in the south-east. They are highly esteemed for their industry, and quickly assimilate with the Servians. Near Alexinatz there is a small colony of Albanians, whilst Tsigani, or gipsies, are met with in all parts of the country. They profess to be Christians, and one of their principal occupations is the manufacture of bricks. The Spanish Jews, so numerous formerly at Belgrad, have most of them retired to Semlin, their places being filled by German and Hungarian Jews.*

Taken as a whole, Servia was a prosperous country before the recent war. The population has increased rapidly since the declaration of independence, but is not nearly as dense yet as in the neighbouring plains of Hungary or Wallachia. Scarcely one-eighth of the area is under cultivation, and agricultural operations are for the most part carried on in the rudest manner. Excepting in the most fertile valleys, such as that of the Lower Timok, the fields are allowed to lie fallow every second year. The exports of Servia clearly exhibit the rudimentary condition of its agriculture, for they consist principally of lean pigs, which find their way in thousands to the markets of Germany, and of cattle. The peasant of Servia derives most of his revenue from the sale of these animals. Within the last few years he has also exported some wheat to the markets of Western Europe. If it were not for the Bulgarian labourers who annually flock to the country in search of field-work, Servia would not produce sufficient corn for its own consumption.†

* The population of Servia in 1878 may be estimated at 1,721,000 souls, including 1,166,000 Servians, 280,000 Bulgarians, 160,000 Wallachians, 100 Mohammedan Albanians, 30,000 gipsies, &c.

† The exports in 1874 were valued at £1,400,000, and included 54,104 head of cattle, 271,219 pigs, 1,172,571 sheep and goat skins, wheat, raki, &c.

Industry throughout the country is still in its infancy. The Servian despises all manual labour excepting agriculture, and it is for this reason he looks down upon the German mechanics in the towns. Young men of the least education aspire to government employment, and the bureaucratic plague, which has wrought such injury in the neighbouring Austro-Hungarian empire, is thus being developed. There are, however, others who have studied at foreign universities, and who devote their energies to the spread of education at home. The progress made in this respect within the last few years has been enormous. In 1839 the sovereign of the country could neither read nor write, whilst, at the present time, Servia, with its numerous schools and colleges, is becoming the intellectual centre of the Balkan peninsula.*

The Servians have used their best efforts to remove from their country everything reminding them of the ancient dominion of the Mussulman, and they have nearly accomplished this. The Belgrad of the Turks has been converted by them into a Western city, like Vienna or Buda-Pest; palaces in European style have arisen in the place of mosques and minarets; magnificent boulevards intersect the old quarters of the town; and the esplanade, where the Turks exposed the heads of their victims stuck on poles, has been converted into a park. Shabatz, on the Save, has become a "little Paris;" Semendria (Smederevo), on the Danube, which gave the signal of rebellion in 1806, has arisen like a phœnix from its ashes; whilst Posharevatz, known as Passarovitz in the history of treaties, has likewise been transformed. Progress is slower in the interior, but good roads now extend to the most remote corners of the country.

Servia is an hereditary constitutional monarchy. The Prince, or *Kniaz*, governs with the aid of responsible ministers and of a senate; he promulgates the laws, appoints all public functionaries, commands the army, and signs the treaties. He rejoices in a civil list of £20,000. His successor, in the case of there being no male heir, is to be elected by universal suffrage. The *Skupshtina*, or national parliament, traces back its origin to the earliest times of a Servian monarchy. It numbers 134 members, of whom one-fourth are nominated by the Prince, and the remainder elected by all male taxpayers. This parliament exercises legislative functions conjointly with the Prince. In addition to it there exist rural parliaments in each of the 1,063 *obshtinas*, or parishes, and these enjoy extended rights of local self-government. The constitution provides for the election of a *Skupshtina* of 536 members by universal suffrage, should extraordinary events make such a meeting desirable. The affairs of the country have hitherto been managed satisfactorily. A revenue of £554,000 sufficed for the requirements of the State, and up to the outbreak of the war there existed no public debt.

Religious liberty exists, but the Greek Church is declared to be that of the State. It has been independent of the Patriarch of Constantinople since 1376, and

* There are a university, a military academy, a seminary, an agricultural school, 11 superior schools, and 377 elementary schools, with 567 teachers, and about 20,000 pupils.

is governed by a synod consisting of the Archbishop of Belgrad and the Bishops of Ushitza, Negotin, and Shabatz. The former is appointed by the Prince. The high dignitaries of the Church are in receipt of salaries, but ordinary priests are dependent upon fees and gifts. The monasteries have been suppressed by a recent decision of the *Skupshtina*, and their revenues are to be devoted to educational purposes.

The military forces of the country consist of a standing army of about 4,000 men, and of a militia including all men capable of bearing arms up to fifty years of age. The first ban of this militia is called out annually for training, the second ban only in case of war. Servia is thus able to place an army of 150,000 men in the field, but the efficiency of these badly trained troops leaves much to be desired, as has been shown by recent events.

The only towns of importance in old Servia are Belgrad (27,000 inhabitants), Posharevatz (7,000 inhabitants), Shabatz (6,700 inhabitants), and Kraguyevatz (6,000 inhabitants). In that portion of Servia which has been acquired by the treaty of Berlin, and which is almost exclusively inhabited by Bulgarians and Mohammedan Albanians, are Nish (16,000 inhabitants), in a most fertile district, the ancient capital of all Servia; Leskovatz (10,000 inhabitants), and Vranya (9,000 inhabitants), the latter with iron works and armourers' shops.

Montenegro.

The name Montenegro is a translation of the Servian Tsrnagora, or "black mountains." It is a curious designation for a country of white or greyish calcareous mountains, whose colour even strikes the voyager on the Adriatic. The name, according to some, is to be taken figuratively, and is to be understood as designating a country of "bad" or "black" men; others are of opinion that it refers to ancient pine forests which have now disappeared.

The Turks have never succeeded in subjugating the Montenegrins, who found safety in their mountain fastnesses. Occasionally the Montenegrins placed themselves under the protection of a foreign power, such as that of Venice, but they never acknowledged the Sultan as their sovereign. The mountains, however, to which they owe their independence, are at the same time their weakness, for they isolate them from the rest of the world. A high range of mountains, as well as a strip of Turkish territory, separates them from their Servian kinsmen; another range, held by the Austrians, cuts them off from the Gulf of Cattaro and the Adriatic Sea. The small Lake of Scutari (Skodra) is their sea; the Zeta and Moracha, which feed it, are their national rivers. If the Montenegrins were permitted to descend into the plains without sacrificing their independence, the arid plateaux now inhabited by them would soon be deserted by all but shepherds.

The eastern portion of Montenegro, which is known as the Berda, and drained by the Moracha and its tributaries, is comparatively of easy access. The mighty dolomitic pyramids of the Dormitor (8,550 feet) command its valleys in the

north, whilst the rounded heights of Kom (9,000 feet) bound it on the east. The Berda differs in no respect from most other mountain countries. It is only in the western portion of the country, in Montenegro proper, that we meet with features altogether distinct. We there find ourselves in a labyrinth of cavities, valleys, and depressions, separated by craggy calcareous ridges, abounding in narrow fissures, the hiding-places of adders. Only the mountaineers are able to find their way in this inextricable labyrinth. "When God created the world," they tell you laughing, "he held in his hand a sack full of mountains. Right

Fig. 49.—Montenegro and the Lake of Skodra.
Scale 1 : 1,500,000.

above Montenegro the sack burst, and hence the fearful chaos of rocks which you see before you."

Seen from an immense height, Montenegro resembles a vast honeycomb with thousands of cells, and this appearance is due to aqueous agencies. The water at one spot has scooped out wide valleys, whilst elsewhere its long-continued action has merely succeeded in producing narrow *rudinas*, or sink-holes. After heavy rains the waters accumulate into lakes, covering fields and pastures, but ordinarily they run off rapidly through sink-holes concealed by brambles, only to reappear again near the seashore as abundant springs of bluish water. The Zeta, the principal river of Montenegro, is fed by rivulets which are swallowed up in the valley of

Niksich to the north, and find their way to it through subterranean channels. Similar phenomena have already been noticed in connection with Bosnia (p. 127). The capital of Montenegro, Tsetinye (Cetinje), lies in the very midst of the mountains, in the centre of an ancient lake basin. Formerly it was accessible only by a most difficult mountain path, for the Montenegrins took care not to construct roads, which would open their country to the guns of their enemies. The requirements of commerce, however, have recently induced them to connect it with Cattaro by means of a carriage road.

The Montenegrins are the kinsmen of the Servians of the Danube, but their life of almost incessant warfare, the elevation and sterility of their country, as well as the vicinity of the Albanians, have developed special features amongst them. The quiet life of the plains is unknown to the Montenegrin; he is violent, and ready at all times to take up arms; in his belt he carries a whole arsenal of pistols and knives, and even when working in the fields he has a carbine by his side. Until recently the price of blood was still enacted, and a scratch even had to be paid for. This blood vengeance was transmitted from generation to generation, until the number of victims was equal on both sides, or a monetary compensation, usually fixed at ten sequins, had been accepted. Cases of hereditary vengeance are rare now, but the ancient "custom" could be suppressed only by a law of terrible severity, which punishes murderers, traitors, rebels, thieves twice convicted, incendiaries, and scoffers at religion alike with death. Compared with the Servian of the Danube, the Montenegrin is a barbarian. Nor is his personal appearance equally prepossessing. The women, however, have regular features, and, though less dignified in their carriage than their kinswomen of Servia, they possess, as a rule, more grace and elasticity of movement. They are very prolific, and if a family increases too rapidly it is customary for a friend to adopt one or more of the children.

Up to the invasion of the Osmanli the upper valleys of Montenegro were the home merely of herdsmen and brigands. But the inhabitants of the lower valleys were forced to retire to these austere heights in order to escape slavery. They cultivated the soil, bred cattle and sheep, and sometimes robbed their neighbours. But the sterile soil yielded only a scanty harvest, and famines were by no means unfrequent. Bosnian Uskoches, who fled to the mountains in order to escape Mussulman oppression, only added to the misery by reducing to a minimum the share of cultivable soil which fell to the lot of each family. The pastures are still held in common, in accordance with the ancient customs of the Servians. According to a recent census, Montenegro is said to have a population of nearly 200,000 souls. This may be an exaggeration, but the country is not even able to support 120,000 inhabitants without drawing supplies from beyond, and the armed incursions into neighbouring districts might thus be excused as an "economical necessity." Death from hunger or on the field of battle was often the only alternative. The Montenegrin always prefers the latter, for he does not fear death, and "May you never die in bed!" is a wish universally expressed at the cradle of a new-born infant. If a man is unfortunate enough to die of disease,

or from old age, his friends excuse him euphemistically by charging the "Old Murderer" with his death.

Recent events have considerably enlarged the frontiers of Montenegro. Niksich and Podgoritza, the old Turkish fortresses, which were always a thorn in the side of the Montenegrins, the one on the northern, the other on the southern frontier, have been surrendered to them; whilst on the Adriatic they have been granted possession of the port of Antivari for commercial purposes. The Montenegrins are thus enabled to import freely, and without the intervention of the merchants of Cattaro, the powder, salt, and other articles they require, and to export their own produce. Their commerce, even now, is of some importance. They export smoked mutton, sheep and goats, skins, tallow, salt fish, cheese, honey, sumach, insect powder, &c., of an estimated value of £40,000 annually.

The mountaineers have established friendly relations with their neighbours, from whom they are able now to purchase what they require. In summer they permit the inhabitants of the coast to take their cattle into the hills, whilst in winter they themselves descend to the seaboard, where they are sure now of a friendly reception.

The Montenegrins, like their neighbours the Albanians, frequently leave their country for a time in order to seek work in the great cities of the East. Thousands of them are to be met in Constantinople, where they manage to live on friendly terms with the Turks, their "hereditary enemies." They are even to be found in Egypt.

The Tsigani are the only strangers met with in the country. They resemble the Servians in language, dress, religion, and customs, and only differ from them by working at a useful trade, that of smiths. Their industry, however, causes them to be objects of disdain, and they are not permitted to intermarry with Servians.

The government of Montenegro is a curious mixture of democratic, feudal, and despotic institutions. The citizens fancy that they are equals, but they are not, for certain families exercise a powerful influence. The sovereign, who appropriates about half the revenue of the country, and receives 8,000 ducats annually from Russia in addition, appoints the members of the Senate, or *Soryet*. The *Skupshtina* includes the *glavars*, or chiefs, of the thirty-nine tribes (*plemena*), but has hitherto limited itself to applauding the "speech from the throne." There is a body-guard of a hundred men, and the whole of the male population is bound to take the field under the leadership of Serdars. The country is divided into eight *nahiés*, or districts, of which four (Bielopavlichka, Uskochka, Morachka, and Vasoyevichka, with the country of the Kuchi) constitute the Berda, and four (Katunska, Liesanska, Riechka, and Tsermnichka) belong to Montenegro proper. Each of these districts is placed under a *kniaz*. The families and associations of families (*brastros*) are governed by *hospodars* and *starshinas*, dependent upon the tribal chiefs, or *glavars*.

To these districts must now be added the territories ceded by the treaty of Berlin (1,958 square miles, with 116,000 inhabitants), including the towns of Niksich, Podgoritza, and Antivari. These districts are almost exclusively inhabited by Slavs, but amongst them are several thousand Mohammedans.

Lombardy
Parma
Modena
Tuscany
Leghorn
Gulf of Genoa
Elba
Corsica
Bastia
Ajaccio
Porto Vecchio
Str. of Bonifacio
Bonifacio
Sardinia
Alghero
Asinara
Gulf of Asinara
Sassari
Porto Torres
Castel Sardo
Terranova
Orbitello
Monte Christo
Civita Vecchia
ROME
Tivoli
Frascati
Albano
Velletri
Anzio
Nettuno
Terracina
Gaeta
Mola
Monopoli
Bari
Barletta
Manfredonia
Mt St Angelo, or Gargano
Lesina
Pesaro
Rimini
Ancona
Loreto
Macerata
Fermo
Ascoli
Teramo
Aquila
Sulmona
Isernia
Benevento
Capua
Naples
Gaeta
Gulf of Venice
Venice
Padua
Verona
Vicenza
Brescia
Bergamo
Milan
Pavia
Novara
Turin
Alessandria
Asti
Coni
Nice
Genoa
Savona
Ventimiglia
Mt Blanc
Mt Rosa
Mt Viso
Mt Cenis
Mt Iseran
Mt Iseran
Mt Cenis
Mt Viso
Mt Rosa
Mt Blanc
Switzerland
Germany
Austria
Tyrol
Carinthia
Carniola
Istria
Pola
Fiume
Trieste
Gorizia
Udine
Belluno
Feltre
Conegliano
Treviso
Bassano
Vicenza
Verona
Mantua
Modena
Reggio
Parma
Piacenza
Lodi
Cremona
Brescia
Bergamo
Como
Lugano
Locarno
Bellinzona
Chiavenna
Sondrio
Tirano
Aosta
Ivrea
Vercelli
Novara
Casale
Alessandria
Tortona
Voghera
Pavia
Milan
Lodi
Cremona
Mantua
Modena
Reggio
Parma
Piacenza
Bologna
Ferrara
Rovigo
Adria
Chioggia
Venice
Gulf of Venice
Grosseto
Orbitello
Monte Argentario
Civita Vecchia
Corneto
Viterbo
Orvieto
Perugia
Assisi
Foligno
Spoleto
Terni
Rieti
Narni
Otricoli
Civita Castellana
Nepi
Sutri
Bracciano
Palo
Ostia
Tivoli
Frascati
Albano
Velletri
Anzio
Nettuno
Terracina
Gaeta
Capua
Naples
Aversa
Caserta
Nola
Avellino
Benevento
Isernia
Campobasso
Larino
Termoli
Vasto
Chieti
Pescara
Teramo
Aquila
Sulmona
Popoli
Penne
Ascoli
Fermo
Macerata
Loreto
Ancona
Sinigaglia
Fano
Pesaro
Rimini
Cesena
Forli
Faenza
Imola
Bologna
Modena
Reggio
Parma
Piacenza
Lodi
Cremona
Brescia
Bergamo
Como
Lugano
Locarno
Bellinzona
Chiavenna
Sondrio
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Aosta
Ivrea
Vercelli
Novara
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Alessandria
Tortona
Voghera
Pavia
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Parma
Piacenza
Bologna
Ferrara
Rovigo
Adria
Chioggia
Venice
Gulf of Venice
Grosseto
Orbitello
Monte Argentario
Civita Vecchia
Corneto
Viterbo
Orvieto
Perugia
Assisi
Foligno
Spoleto
Terni
Rieti
Narni
Otricoli
Civita Castellana
Nepi
Sutri
Bracciano
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Popoli
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Fermo
Macerata
Loreto
Ancona
Sinigaglia
Fano
Pesaro
Rimini
Cesena
Forli
Faenza
Imola
Bologna

ITALY
TYRRHENIAN SEA
MEDITERRANEAN SEA
SARDINIA
Cagliari
Sassari
Alghero
Bosa
Oristano
Iglesias
Monte Santo
Bellavista
Sierra Cavallo
Palmiera
Isolette Fratelli
Ferrato
Carbonara
Pula
Spartivento
Tunis
Bon
Hammamet
Monastir
Mehedieh
Lampion
Lampedusa
Valetta
MALTA
Marsala
Palermo
Trapani
Messina
Catania
Augusta
Syracuse
Pantellaria
Lipari Is.
Stromboli
Vulcano
Salina
Felicudi
Alicudi
Ustica
Galita
G. of Tunis
G. of Tarento
English Miles
Longitude East
Greenwich

ITALY.*

I.—General Aspects.

THE limits of the Italian peninsula have been most distinctly traced by nature. The Alps, which bound it in the north, from the promontories of Liguria to the mountainous peninsula of Istria, present themselves like a huge wall, the only breaches in which are formed by passes situated high up in the zones of pines, pastures, or eternal snows. Italy, like its two sister peninsulas of Southern Europe, thus constitutes a world of its own, destined by nature to become the theatre of a special evolution of humanity. Its delightful climate, beauteous skies, and fertile fields distinguish it in a marked manner from the countries lying beyond the Alps; and an inhabitant of the latter who descends the sunny southern slope of this dividing range cannot fail to perceive that everything around him has changed, and that he has entered a "new world."

The protecting barrier of the Alps and the sea which bounds it have imparted to Italy a distinct individuality. All its countries, from the plains of Lombardy to the shores of Sicily, resemble each other in certain respects. There is a sort of family likeness about them; but still what delightful contrasts, what

* Authorities:—Zuccagni Orlandini, "Corografia fisica, storica e statistica dell' Italia e delle sue Isole;" Marmocchi, "Descrizione d'Italia;" Amato Amati, "L'Italia sotto l'aspetto fisico, storico, artistico e statistico;" Taine, "Voyage en Italie;" Gregorovius, "Wanderjahre in Italien," "Geschichte der Stadt Rom;" Ann. di Saluzzo, "Le Alpi che cingono l'Italia;" Cattaneo e Lombardini, "Notizie naturali e civili su la Lombardia;" Lombardini, "Pianura subapennina," "Condizione idraulica del Po," Martins, Gastaldi, "Terrains superficiels de la vallée du Pô;" De Mortillet, "Anciens glaciers du versant méridional des Alpes," "Mémoires divers;" Bertolotti, "Liguria marittima;" Targioni Tozzetti, "Voyage en Toscane;" Salvagnoli Marchetti, "Maremme Toscane;" Noel des Vergers, "L'Étrurie et les Étrusques;" Beulé, "Fouilles et découvertes;" Giordano, "Roma e suo territorio;" Ponzi, "Histoire naturelle du Latium;" De Prony, "Marais Pontins;" Works of D'Ampère and Stendhal, &c.; Davies, "Pilgrimage of the Tiber;" Francis Wey, "Rome;" Spallanzani, "Voyage dans les Deux-Siciles;" Smyth, "Sicily and its Islands;" Dolomieu, "Voyage aux Iles de Lipari," De Quatrefages, "Souvenirs d'un naturaliste;" La Marmora, "Voyage en Sardaigne, Description statistique, physique et politique de l'île," Manteguzza, "Profili e paesaggi della Sardegna;" Von Maltzan, "Reise auf der Insel Sardinien;" Spano, "Itinerario della Sardegna;" Correnti e Maestri, "Statistica dell' Italia."

picturesque variety, do we not meet with! Most of these contrasts are due to the Apennines, which branch off from the southern extremity of the French Alps. At first they run close to the seashore, like a huge wall supported at intervals by powerful buttresses; subsequently they traverse the whole of the peninsula. At times they are reduced to a narrow ridge, at others they spread out into vast masses, rising in plateaux or ramifying into chains and promontories. River valleys and plains intersect them in all directions; lakes and filled-up lake basins are spread out at the foot of their cliffs; and numerous volcanoes, rising above the general level, contrast, by their regular form, with the rugged declivities of the Apennines. The sea, following these sinuosities in the relief of the ground, forms a series of bays, arranged with a certain degree of symmetry. In the north these bays do not much encroach upon the land, but in the south they penetrate deeply, and almost form veritable gulfs. There once existed an Italy of granitic rocks, but it exists no longer, for the rocks of the Apennines and of the plains teach us that the Italy of the present is of recent origin, and that the many islands of which it consisted formerly were united into a single peninsula as recently as the Eocene epoch.

Italy, compared with Greece, exhibits much sobriety in its configuration. Its mountains are arranged in more regular ridges, its coasts are less indented, its small archipelagos bear no comparison with the Cyclades, and its three great dependent islands, Sicily, Sardinia, and Corsica, are regular in their contours. Indeed, its contours mark its intermediate position between joyous Greece and severe Iberia. Thus there exists a correspondence between geographical position and contours.

Italy, as a whole, contrasts in a remarkable manner with the Balkan peninsula. The former faces the Ægean, and looks towards the east, whilst in the truly peninsular portion of Italy, to the south of the plains of Lombardy, the westerly slopes offer most life. Secure harbours are most numerous on the shores of the Tyrrhenian, and the largest and most fertile plains slope down towards that sea. It results from this that the western slopes of the Apennines have given birth to the most enterprising and intelligent populations, who have taken the lead in the political history of their country. The west represents the light, whilst the east, bounded as it is by the Adriatic, an inland sea almost, a simple gulf, represents the night. True, the plains of Apulia, though on the east, are wealthier and more populous than the mountain regions of Calabria, but the vicinity of Sicily, nevertheless, even there insures the preponderance of the western littoral. Whilst Greece was in the height of her glory, whilst every initiative went forth from Athens, the cities of Asia Minor, and the islands of the Ægean, those republics which looked towards the east, such as Tarentum, Locri, Sybaris, Syracuse, and Catania, enjoyed a pre-eminence over the cities on the western littoral. The physical configuration of Italy thus facilitated the march of civilisation from the south-east to the north-west, from Ionia to Gaul. The Gulf of Taranto and the eastern coasts of Greater Greece and Sicily were freely exposed to Hellenic influences, whilst further north the peninsula faces about to

the west as it were. There can be no doubt that these features greatly facilitated the expansion of ideas in the direction of Western Europe, and that if it had been otherwise civilisation would have taken another direction.

For nearly two thousand years, from the fall of Carthage to the discovery of America, Italy remained the centre of the civilised world. It maintained its hegemony either by conquest and organization, as in the case of the "Eternal City," or by the power of its genius, the relative liberty of its institutions, its sciences, arts, and commerce, as in the times of Florence, Genoa, and Venice. Two of the greatest events in history, the political unification of the Mediterranean world under the laws of Rome, and at a later epoch the regeneration of the human mind, so appropriately termed "Renaissance," originated in Italy. It behoves us, therefore, to inquire into the geographical conditions which may account for this preponderance during these two ages in the life of mankind.

Mommsen and others have pointed out the favourable position of Rome as an emporium. From the very first that city became the commercial centre of the neighbouring populations. Built in the centre of a circus of hills, and on the banks of a navigable river, not far from the sea, it likewise possessed the advantage of lying on the frontiers of three nations—Latins, Sabines, and Etruscans. When Rome had conquered the neighbouring territories it undoubtedly rose into importance as a place of commerce. This local traffic, however, would never have converted Rome into a great city. Its position is not to be compared with that of places like Alexandria, Constantinople, or Bombay, upon which the world's commerce converges as a matter of course. On the contrary, its situation hardly favours commerce. The Apennines, which environ the territory of Rome in a huge semicircle, constituted a formidable obstacle until quite recently, and were avoided by merchants; the sea near Rome is treacherous, and even the small galleys of the ancients could not enter the inefficient harbour at Ostia without risk.

The power of Rome, therefore, depended but in a small measure upon commercial advantages resulting from geographical position. It is its central position to which that city is mainly indebted for its greatness, and which enabled it to weld the whole of the ancient world into a political whole. Three concentric circles drawn around the city correspond with as many phases in its development. During their first struggles for existence the Romans enjoyed the advantage of occupying a basin of limited extent, shielded on all sides by mountains. When Rome had exterminated the inhabitants of these mountains the remainder of Italy naturally gravitated towards her. The plains of Cis- and Transpadana in the north presented no obstacles, whilst the resistance of the uncivilised tribes of the mountain regions of the south was soon broken, for they found no support amongst the Greek colonies scattered along an extensive coast. Nor were the populations of Sicily, Sardinia, and Corsica sufficiently united to offer an effective resistance to the organized forces of the Romans, who were thus able to extend their power over all the countries comprehended within the second concentric circle referred to.

It happened that the plains of Northern Italy and Sicily were both rich granaries, which enabled the Romans to push forward their conquests. The whole world of the Mediterranean gravitated towards Rome and Italy: Illyria, Greece, and Egypt in the east, Libya and Mauritania in the south, Iberia in the west, Gaul in the north-west, and the transalpine countries in the north.

Rome maintained her power and influence as long as the Mediterranean constituted the world; but, in proportion as the borders of the known world were enlarged, so did Rome lose the advantages which a central position had conferred upon her. Even during the latter days of the Roman empire Milan and Ravenna usurped the position once held by Rome, and the latter became the capital of

Fig. 50.—Rome and the Roman Empire.

the Ostrogothic kingdom, and subsequently the seat of the Byzantine exarchs. Rome, the city of the Cæsars, had fallen for evermore! True the emperors were succeeded by the popes, but the real masters of the "Holy Roman Empire" resided beyond the Alps, and only came to Italy to have their power consecrated. Even in Italy itself Rome ceased to be the leading town, its place being taken by Pavia, Florence, Genoa, Milan, Venice, Bologna, and even Turin.

The unity of Italy has been realised in the course of this century, and, excepting a few Alpine valleys, its political boundaries coincide with its natural ones. It may surprise us that this unity should not have been established long ago, but the geographical configuration of Italy readily lends itself to the

establishment of small states. Its islands, its mountain-bound plains, and coast districts, shut off from the interior of the country by abrupt mountains, formed as many centres where populations of diverse origin were able to lead a life independently of their neighbours. Now and then the whole of Italy acknowledged a single master, but it only did so on compulsion. That spirit of nationality which has given birth to a united Italy only animated very few citizens of the mediæval republics. They might unite to resist a common danger, but no sooner was it past than they went their separate ways, or, still worse, fought amongst themselves about some trifle.

Cola di Rienzi, the tribune of Rome, appealed to the cities of Italy in the middle of the fourteenth century; he adjured them to "throw off the yoke of the tyrant, and to form a holy national brotherhood, whose object should be the liberation of Rome and the whole of Italy." His messengers, carrying a silver wand, went to every city with greetings of amity, and asked that deputies should be sent to the future parliament of the Eternal City. Rienzi, full of the memories of the past, declared that Rome had not ceased to be the "mistress of the world," and had a natural right to govern all nations. It was his aim to resuscitate the past, not to evoke a new life, and his work disappeared like a dream. Florence and Venice, the most active cities of that period, looked upon him as a visionary. "Siamo Veneziani, poi Cristiani," said the proud citizens of Venice in the fifteenth century. They, whose sons fought so valiantly for Italian independence, never thought of calling themselves Italians. At the same time we must bear in mind that the impulse which has made Italy one did not originate with the masses, for there are still millions of Sicilians, Sardinians, Calabrians, and even Lombards who do not appreciate the vast changes which have taken place.

If Italy no longer remains a "geographical expression," it is owing in a large measure to frequent foreign invasions. Spaniards, French, and Germans in turn have seized the fertile plains of Italy, and their hard oppression has taught the Italians to look upon each other as brothers. The Alps might be supposed to offer an effective protection against such invasions, but they do not. They are steepest on the Italian side, whilst their exterior slopes, towards France, Switzerland, and German Austria, are comparatively gentle. Invaders, tempted by the delightful climate and the wealth of Italy, were able to reach easily the Alpine passes, whence they rushed down upon the plains; and thus the "barrier of the Alps" is a barrier only to the Italians, and has always been respected by them, excepting during the Roman empire. Nor is there any reason why they should cross it, for there is no country beyond equal to their own. French, Swiss, and Germans, on the other hand, have always looked upon Italy as a sort of paradise. It was the country of their dreams; they yielded frequently to their desire to possess it, and dyed its coveted plains with blood.

Italy, exposed as it is to attacks from beyond, and no longer situated in the centre of the known world, has definitively lost its *primato*, or foremost place amongst nations, which some of its sons, carried away by an exclusive patriotism,

would restore to it. But though no longer the most powerful nation, and eclipsed in industry, commerce, and even literature and science, it still remains unrivalled in its treasures of art. There is no other country in the world which can boast of an equal number of cities remarkable on account of their buildings, statues, paintings, and decorations of every kind. There are provinces where every village, every group of houses even, delights the eye either by a fresco painting or a work of the sculptor's chisel, a bold staircase or picturesque balcony. The instinct for art has passed into the blood of the people, and we need not wonder if an Italian peasant builds his house and plants his trees so as to bring them into harmony with the surrounding landscape. This constitutes the greatest charm of Italy; everywhere art goes hand in hand with nature. How many artists are there not in Lombardy, Venetia, or Tuscany who would have become famous in any other country, but whose names will never be remembered, in consequence of their overwhelming numbers, or because their lot was cast in some remote village!

Italy owes the rank it has held for more than two thousand years not merely to its monuments and works of art, which attract students from the extremities of the earth, but also to its historical associations. In a country which has been inhabited for centuries by a civilised people there cannot be a town the origin of which is not lost in the darkness of tradition. The modern cities have replaced the Roman towns, and these latter rose upon the ruins of some Greek, Etruscan, or Gallic settlement. Every fortress, every country house, marks the site of some ancient citadel, or of the villa of a Roman patrician; churches have replaced the ancient temples, and though the religious rites have changed, the altars of gods and saints arise anew in the spots consecrated of old. An examination of these relics of all ages is full of interest, and only the most obtuse can resist the influence of the historical reminiscences which surround him.

Italy, after a long period of decay and foreign domination, has again taken its place amongst the foremost modern nations. The aspect of the peninsula has undergone many changes since it received the name of Vitalia, or Italia, from the herds of cattle which roamed over it. Its well-cultivated plains, carefully tended gardens, and busy cities entitle it now to some other appellation. The passes of the Alps and its central position give Italy the command of all the routes which converge from France, Germany, and Austria upon the Gulfs of Genoa and Venice. Its quarries, sulphur and iron mines, its wines and agricultural produce of every description, and its industry afford ever-growing resources. Its men of learning and inventors may fairly claim to be on a level with those of other countries. The population increases rapidly. It is not only more dense than in France, but also sends a considerable contingent of emigrants to the solitudes of Southern America.*

* Area of the kingdom of Italy, 114,413 square miles; population in 1875, 27,482,174.

II.—The Basin of the Po.

Piemont,* Lombardy, Venetia, and Emilia.

The valley of the Po is frequently spoken of as Upper Italy, because it occupies the northern portion of the peninsula, but might more appropriately be termed the Italian Netherlands, for its elevation is less than that of any other group of provinces. It is a river valley now, but during the Pliocene epoch it still formed

Fig. 51.—Monte Viso as it appears from Chiavenna.

a gulf of the sea. This gulf was gradually filled up by the alluvium brought down by the rivers, and upheaved by subterranean forces above the surface of the waters, the erosive action of the mountain torrents continuing all the while: and thus, in the course of ages, the basin of the Po assumed its gentle and regular slope towards the sea. As long as the waters of the Adriatic penetrated the valleys between Monte Rosa and Monte Viso, Italy was attached to the Alps

* Piè di Monte, Piedmont, = Piemonte, i.e. mountain-foot.

of continental Europe only by a narrow neck of land formed by the Ligurian Apennines.

No other region of Europe can rival the valley of the Po as regards the magnificence of its distant prospects. The Apennines in the south raise their heads above the region of forests, their rocks, woods, and pasturages contrasting with the uniform plain spread out along their foot; whilst the snow-clad Alps rise in all their sublimity from the Col di Tenda in the west to the passes of Istria in the east. The isolated pyramid of Monte Viso (thus called from the beautiful prospect which may be obtained from its summit) looks down upon the fields of Saluzzo, and the small lakes in its pasturing region feed a roaring rivulet which subsequently assumes the name of Po. Enormous buttresses to the north-west of Turin support the ice-clad Grand Paradis, near which peeps out the Grivola, perhaps the most charming, the most gracefully chiselled of all Alpine peaks. Right in the bend of the Alpine chain rises the dome of Mont Blanc, like an island above a sea of mountains. Monte Rosa, crowned with a seven-pointed diadem, pushes its spurs far into Italy. Then come the Splügen, the Ortler, the Adamello, the Marmolade, and many another summit distinguished for some special beauty. When from the top of the dome of Milan we behold spread out around us this magnificent amphitheatre of mountains rising above the verdant plain, we may well rejoice that we should have lived to contemplate so grand a scene.

Geographically the Alps belong to the countries which surround Italy. From the south we seize at a glance the entire slope of the mountains, from the vineyards and plantations of mulberry-trees to the forests of beech and larch, the pastures, the naked rocks, and the dazzling fields of ice. But the cultivator only ventured into this difficult region when forced by poverty. The features of the northern slope are quite different. There the land rises gradually, and the valleys are less fertile, but the inhabitants can easily reach the heads of the passes, whence they look down upon the inviting plains of Italy. It is this structure of the Alps which explains the preponderance of the Germanic and Gallic elements throughout their extent, and whilst Italian is spoken only in a few isolated localities beyond this mountain barrier, the French and German elements are largely represented on their inner slopes.

Italy can only claim a few Alpine mountain masses within the basin of the Po, the Adige, and the rivers of Venetia. The most important of these, alike on account of its height, its glaciers, and springs, is the Grand Paradis, which rears its head to the south of the Dora Baltea, between the masses of Mont Blanc and the plains of Piemont. An Englishman, Mr. Mathews, may claim to be the first discoverer of this mountain giant, which even on the Sardinian staff map, published only recently, is confounded with Mont Iseran, a far less noble summit twenty-five miles to the west of it.

None of the other Alpine summits on Italian territory can compare in height with the Grand Paradis, for though the Italian language extends in numerous instances to the central chain of the Alps, the political boundaries of Italy do not.

Switzerland holds possession of the valley of the Upper Ticino, whilst Austria still possesses the Upper Adige. The only rivers rising on the southern slope of the Alps, and belonging in their entirety, or nearly so, to Italy, are the Tagliamento and the Piave. In consequence of this violation of the natural frontiers there are many snow-clad Alpine summits which, though geographically belonging to Italy, are situated on the frontiers of the present kingdom, or even within Swiss or Austrian territory. Amongst these are the giant summits of the Ortler, the Marmolade, and the precipitous Cimon della Pala. The Monte della Disgrazia,

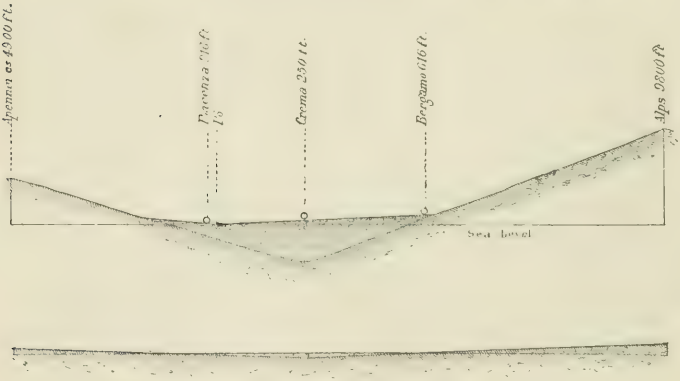
Fig. 52.—Grand Paradis.
From the Map of the French Alpine Club. Scale 1 : 223,000.

however, to the south of the Bernina, is an Italian mountain; such is also, for the greater part, the mountain mass of the Camonica, bounded on the north by the Pass of Tonale, which plays so prominent a part in legendary history, and is commanded by the Adamo, or Adamello, whose glacier streams creep down to the Upper Adige. Farther to the east, in the valley of the Piave, the obelisk surmounting the huge pyramid of the Antelao pierces the line of perennial snow, and there are other peaks scarcely inferior to it in height.

Most of the Alpine groups lying within Italy and between the main chain and

the plains do not exceed the Apennines in height, and only a few amongst them are covered with perennial snow. But the prospects which may be enjoyed from them are all the more charming for this reason, for we find ourselves between two zones, with cultivated valleys, towns, and villages at our feet, and a panorama of bare and snowy summits bounding the view to the north. Several of these mountains deservedly attract large numbers of tourists. Favourites amongst them are the hills rising above the blue lakes of Lombardy, such as the Motterone on Lago Maggiore, the pyramidal Generoso rising in the midst of verdant fields on the Lake of Lugano, the superb hills between the two arms of the Lake of Como and the fertile plains of the Brianza, and Monte Baldo, advancing its buttresses like lions' claws into the waters of the Lake of Garda. The mountains of the Val Tellina, or the Orobia range, to the south of the valley of the Upper Adda, being remote from towns and customary highways, are less frequently

Fig. 53.—The Plain of Débris between the Alps and the Apennines.
According to Zollikofer.



visited than they deserve. Standing at their foot, we may almost fancy being in the Pyrenees. As to the dolomites, on the frontiers of Venetia and the Tyrol, they are unique. Their fantastically shaped rocks, delicately tinted with pink and other colours, contrast marvellously with the green of beeches and firs, or the blue waters of the lakes. Richthofen and others look upon these isolated mountain masses as ancient coral islands, or *atolls*, upheaved to a height varying between 6,500 and 10,400 feet; and, whatever their geological origin may be, they certainly contribute much towards the beauty of the Alpine regions.

If we descend the Italian slope of the Alps, we pass gradually from the more ancient to the most recent geological formation, until we finally reach the alluvial plain. Metamorphic rocks, *verrucano*, dolomites, and other rocks overlie the granites, the gneiss, and the schists of the more elevated mountain masses. These are succeeded by beds of Triassic and Jurassic age. Lower still we meet with

terraces and hills composed of tertiary marls, clays, and conglomerates. Monte Bolca, so famous amongst geologists on account of its fossils, belongs to this formation.* The whole of the plain of Lombardy and Piemont, with the exception of the isolated hillocks rising in it, and a few marine deposits near its margin, consists of débris brought down by the rivers. The depth of this accumulation is not yet known, for hitherto no borings have pierced it; but if we suppose the slopes of the Alps and the Apennines to continue uniformly, it would amount to no less than 4,130 feet. The two diagrams (Fig. 53) are intended to illustrate this feature. In the upper of these the heights are exaggerated tenfold; in the lower both the horizontal and the vertical scales are the same. A glance at this diagram reveals the astounding fact that the volume of this débris almost equals that of the existing mountain systems.

Fig. 54.—Slope of the Valley of the Po.
The vertical scale is ten times larger than the horizontal.

The vast plain stretching from the Adriatic to the foot of the Monte Rosa and the Viso may boast of its peninsulas, its islands, and even its archipelagos, as if it were a sea. The tertiary hills of Northern Monferrato, to the east of Turin, attain a height of 1,600 to 2,000 feet, and the valley of the Tanaro completely separates them from the Ligurian Alps and the Apennines. Even at the very foot of the Alps, as at Cavour and elsewhere, isolated granitic or porphyritic pyramids and domes rise in the midst of the plain sloping down towards the Po.† The hump-backed Bosco Montello, to the south of the Piave, is another isolated hill; and on the banks of the Po may be seen a hillock of pebbles and marine sands, abounding in fossils, which bears the village of San Colombano and its vineyards. Several volcanic peaks, surrounded by cretaceous formations, rise in the midst of the plains to the east of the Lake of Garda. The craters of the Berici, near Vicenza, and of the Euganean Hills, near Padua, have not vomited

* Principal Alpine summits of Italy:—Monte Viso, 12,585 feet; Grand Paradis, 13,271 feet; Monte della Disgrazia, 11,849 feet; Adamello, 11,677 feet; Antelao, 10,690 feet; Brunone (Orobia range), 10,370 feet; Generoso, 5,670 feet; Monte Baldo, 7,310 feet; Monte Bolca, 3,143 feet.

† Altitudes:—Source of the Po, 6,400 feet; Saluzzo, 1,260 feet; Turin, 755 feet; Pavia (mouth of Ticino), 330 feet; Piacenza, 217 feet; Cremona, 150 feet; Mantua, 89 feet; Ferrara, 29 feet.

flames within the historical epoch, but the hot and the gas springs which issue from clefts in the trachytic and basaltic rocks prove sufficiently that volcanic forces are not yet quite extinct in that part of Italy. Earthquakes occur frequently in the neighbouring Alps, and particularly near Belluno and Bassano.

A similar volcanic zone extends along the northern slope of the Apennines, which bound the valley of the Po on the south. Hydrogen gas escapes from fissures in the rocks to the south of Modena and Bologna, and is utilised in several instances in the manufacture of lime, and for other purposes. These gas springs of Pietra Mala, Porretta, and Barigazzo were known by the ancients and during the Middle Ages as "fiery springs," and they illuminated the path of the traveller overtaken by the night. Lower down the slope, almost on the verge of

Fig. 55.—Mud Volcanoes and Hot Springs of the Northern Apennines.

Scale 1 : 1,150,000.

Hydrogen Springs. Mud Volcanoes. Hot Springs.

10 Miles.

the plains, we meet with a line of mud volcanoes, or *bombi*, the most famous of which are those of Sassuolo, near Modena. The largest of these, that of Mirano, has no less than forty craters. The ancient gulf of the sea, now converted into a plain, is thus skirted by volcanic cones, mud volcanoes, hot springs, and deposits of sulphur. As high up as Piemont, and notably at Acqui, we meet with hot springs, attesting that volcanic activity is not yet altogether extinct.

The valleys of the Alps and the plains extending along their foot were filled, in a former geological epoch, with huge glaciers, descending from what was anciently the immense glacial region of Central Europe. There is not a valley between that of the Tanaro in the west, and that of the Isonzo descending from the mountains of Carinthia, but contains accumulations of débris carried down by the

La Dent blanche, 14,319 ft. | Château des Dames, 11,398 ft. | Mt. Cervin, 14,705 ft. | Mischabel Hörner, 14,942 ft. | Breithorn, 13,680 ft. | Monte Rosa (Dufour Spitze, 15,217 ft.).

THE PENNINE ALPS, AS SEEN FROM THE BECCA DI NONA (PIC CARREL), 10,380 FEET.

glaciers, and now covered with vegetation. Most of these ancient glaciers exceeded those of the Monte Rosa and the Finsteraarhorn in extent, and several of them rivalled the existing glaciers of the Himalaya. If we would gain a notion of what the Alps were like during this glacial epoch, we must go to Greenland or to the Antarctic regions.

One of the smallest of these ice streams, that which descended from the mountains of Tenda in the direction of Cuneo, had a length of thirty miles. That which brought down the ice of Mont Genèvre, Mont Tabor, and Mont Cenis had twice that length, and its moraines formed a veritable amphitheatre of hills, locally known as *regione alla pietre*, or stony region. Farther north the streams of ice descending from the Pennine Alps between the Grand Paradis and

Fig. 56.—The Ancient Glaciers of the Alps.
Scale 1 : 4,800,000.

Mont Blanc united in a single stream eighty miles in length, and spread over the plain far beyond Ivrea. The alluvial accumulation of this ancient glacier rises 1,100 and even 2,130 feet above the valley through which the Dora Baltea now flows. One of its lateral moraines, known as the *Serra d'Ivrea*, forms a regular rampart to the east of the river, eighteen miles in extent. Its slopes are now covered with chestnuts. The western ravine (Colle di Brossa) is less prominent, because it is inferior in height; but the frontal ravine, forming a complete demicircle, can still be traced readily. In the débris accumulated at the foot of this ancient glacier, rocks derived from Mont Blanc are mixed with others brought down from Mont Cervin. And yet it was but a dwarf when compared with the ancient twin glacier of the Ticino and the Adda, which extended from the Simplon to the Stelvio, filled up the cavities now occupied by the Lago Maggiore

and the Lake of Como, sent a lateral branch to the tortuous bed of the Lake of Lugano, and finally, after a course of from 100 to 120 miles, debouched upon the plain of Lombardy. The glacier of the Oglio was small in comparison with it, but it was exceeded by that of the Adige, the most considerable of all on the southern slope of the Alps. This river of ice, from the mountains of the Oetzthal, where it originated, to its terminal moraine to the north of Mantua, had a length of 175 miles. One of its branches descended towards the east, down

Fig. 57.—The Serra of Ivrea and the Ancient Glacier Lakes of the Dora.
From the Sardinian Staff Map. Scale 1 : 250,000.

the valley of the Drave, as far as where the town of Klagenfurt now stands. Its main stream filled up the cavity of the Lake of Garda, pushing along a formidable rampart of elevated moraines.

The hand of man is scarcely able to make an impression upon the vast accumulations heaped up by the action of the glaciers. The hills of Solferino, of Cavriana, and Somma Campagna, so often named in connection with battles, are nothing but débris brought down from the flanks of the Alps, and they were much higher formerly than they are now.

Some of the erratic blocks were as large as houses, but, being used as quarries, they are fast disappearing. One of them at Pianezza, at the mouth of the Susa valley, is 80 feet long, 40 feet broad, and 46 feet high, and a chapel has been built upon it. The huge erratic blocks in the hills between the two arms of the Lake of Como have supplied materials for the monolithic columns of the churches and palaces in the environs. The slopes of the hills of Turin facing the Alps are likewise covered with erratic blocks.

When the glaciers retired into the upper valleys of the Alps, the soil which they covered was left bare, and the depressions now occupied by the beautiful

Fig. 58.—Ancient Lakes of Verbano.

lakes of Lombardy were revealed. These depressions, whose bottom even now sinks down below the level of the ocean, were formerly arms of the sea, in character very much like the fiords of Norway. That such was the case is proved by the presence, in every one of the Lombard lakes, of a sardine (the *agone*), which naturalists consider to be a sea fish. In Garda Lake, moreover, there still dwell two marine fishes which have adapted themselves to their new condition of life, as well as a small marine shell-fish.

The number of these Alpine lakes was much larger formerly, and those which still exist shrink from year to year. In Upper Piemont alluvial deposits have long ago filled up the lakes, and there now only remain a few pools of

water to indicate their site. The first sheets of water to which the term "lake" may fairly be applied are met with on both banks of the Dora Baltea (see Fig. 57). The little basin of Candia and the shallow Lake of Azeglio, to the west and east of the river, are the only remains of *Lacus Clisius*, which covered an area of several hundred square miles until its waters broke through the semicircular terminal moraine which bounded it on the south. The Dora Baltea formerly escaped from this lake in the south-east, its present course only dating from the fourteenth century.

Fig. 59.—The Upper Extremity of the Lake of Como.
Scale 1 : 148,000.

2 Miles.

The dotted tract has become dry land since 1833.

Since this reservoir has been drained, the first lake of importance in the west is that of Verbano, very inappropriately called Lago Maggiore, or the "principal lake," as that of Garda exceeds it in extent. Ancient beaches, at an elevation of 1,300 feet above the sea, prove that the waters of the lake have considerably subsided, and that its area was much larger formerly; and it curiously ramified with neighbouring lake basins, now merely connected with it by rivers. The ancient moraine at the foot of this lake, and through which the Ticino has excavated itself a passage, still rises to a height of 980 feet.

Centuries elapsed before the changes which we now perceive were accomplished. Still they proceeded at a sufficiently rapid rate. Even now the alluvium carried down by the Ticino and the Maggia continually encroaches upon the Lago Maggiore. Seven hundred years ago the village of Gordola stood on the shore of the lake: it is now nearly a mile away from it. The landing-places of Magadino, at the mouth of the Ticino, have to be continually shifted, for the lake retires steadily. Only sixty years ago barges were able to receive their cargoes at a wharf nearly half a mile higher up than the present one. The Gulf

Fig. 60.—Section of the Northern Portion of Lake Como.
Scale 1 : 25,000

Fig. 61.—Section of the Lake of Lecco, near the Bifurcation.
Scale 1 : 25,000.

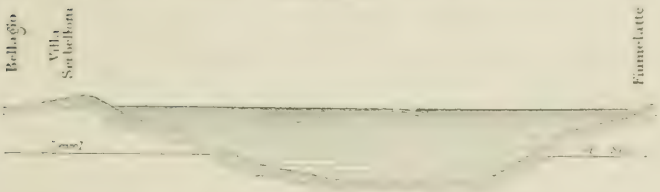
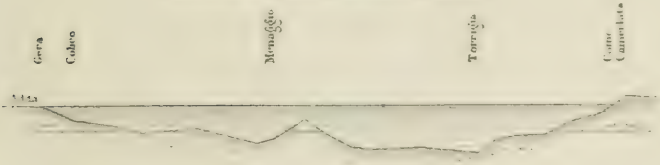


Fig. 62.—Longitudinal Section of Lake Como.
Horizontal scale 1 : 50,000. Vertical scale 1 : 500,000.



of Locarno is gradually being separated from the main sheet of water by alluvial deposits brought down by the Maggia.

The Lario, or Lake of Como, which rivals the Maggiore by its beauty, is likewise being gradually silted up. In the time of the Romans the navigation extended as far as Summolacus (lake-head), the modern Samolaco. But the torrent of Mera gradually converted most of the upper extremity of the lake into an alluvial plain, whilst the alluvial deposits carried down by the Adda cut off the remainder from the main body of water. There now remains only the *Lacus*

Dimidiatus, or Lake of Mezzola, which is shrinking from year to year, and will finally disappear altogether. The miasmata rising from the swamps at the mouth of the Adda have frequently depopulated the environs, and the ruined fort of Fuentes, at the mouth of the river, built to defend the Val Tellina, was hardly ever more than a hospital for its fever-stricken garrison.

The south-eastern arm of the lake, that of Lecco, through which the Adda makes its escape to the south, has likewise been divided into a series of separate basins. Nature, which would convert these lakes into bottom-lands at no distant date, is being aided here by the works of man. The barrier which obstructed the free egress of the Adda has been cleared away, the structures of fishermen have been removed, and, in consequence of these and other engineering measures, the once-dreaded rises of the lake have been reduced to a minimum, and the southernmost of the lake basins, that of Brivio, has been converted into dry land. The large Lake of Brianza, which extended formerly far to the south-west, has likewise been partially drained, and there now remain only a few lakelets of small extent.

We know sufficient of the bottom of the Lake of Como to enable us to judge of the manner in which it is becoming gradually filled up with alluvium. The mud deposited in its northern portion has filled up all the original inequalities of the soil, and even in the centre of the lake, and in its south-eastern arm, the bottom is almost a perfect level. In the Como arm, however, which receives no tributary river of any importance, the bottom is still full of inequalities. These differences amply prove to us the geological agency of the rivers, which must terminate in the lake being converted into a bottom-land, with a river flowing through its centre. The third of our diagrams (Fig. 62) shows that the greatest depth now hardly exceeds 1,300 feet, whilst, if we may judge from the slopes of the hills which bound it, the depth in former times cannot have been less than 2,300 feet.

The Sebino, or Lake of Isco, and the lakelet of Idro, which are fed by the glacier streams of the Adamello, exhibit the same features as the lakes farther to the west. The Benaco, or Lake of Garda, however, the most extensive of these Alpine lakes, is very stable as regards its outline and the configuration of its bottom, a fact sufficiently explained by the small size of its tributary streams as compared with its vast area. The old Alpine lakes of the Venetian Alps have disappeared long ago, and there remain only a few ponds, filling cavities in the dolomitic rocks and peat bogs, to indicate their ancient sites.*

* Italian Alpine lakes having an area of more than five square miles :—

Name.	Average Area. Sq. Miles.	Average Altitude. Feet.	Depth, Feet. Max.	Depth, Feet. Average	Capacity. Millions of Galls.
Lake of Orta	5·4	1,122	820 (?)	490 (?)	462,000
Verbano, or Lago Maggiore	81·4	646	1,230	690	9,680,000
Lake of Varese	6·2	771	85	33	35,200
Ceresio, or Lake of Lugano	19·3	889	950	490	1,584,000
Lario, or Lake of Como	60·2	663	1,352	810	7,700,000
Sebino, or Lake of Iseo	23·0	646	980	490	1,980,000
Lake of Idro	5·4	1,240	400 (?)	(?)	(?)
Benaco, or Lake of Garda	115·8	226	960 (?)	490	9,900,000

These lacustrine basins, like all other reservoirs of the same kind, regulate the outflow of the torrents which empty into them. During the freshets they store up the superabundant waters, and only part with them in the dry season, and upon their difference of level in different seasons depend the oscillations of the emissary rivers which issue from them. In the case of the Lake of Garda, which drains but a small area in proportion to its size, this difference is small, and throughout the year the pellucid waters of the Mincio flow tranquilly beneath the

Fig. 63.—Villa Serbelloni, on the Peninsula of Bellagio, Lake of Como.

blackened ramparts of Peschiera. Such is not the case as regards either the Lago Maggiore or the Lake of Como, for the volume of water discharged into them is so considerable that their level in summer and winter varies to the extent of several yards, and corresponding differences may be observed in the rivers issuing from them. Lake Como rises no less than 12 feet, and increases 70 square miles in area, whilst the Lago Maggiore sometimes rises 22 feet, and

increases to the extent of one-fifth. The volume of the Ticino, when at its highest, almost equals the average volume of the Nile, and if it were not for the regulating influence of the lake from which it issues, it would alternately convert the plains of Lombardy into a sheet of water and leave them an arid tract of land.*

The Alpine lakes of Italy thus play an important part in the economy of the country. They render the climate more equable, serve as high-roads of commerce, and, being the centres of animal life, attract a dense population. But it is not this which has rendered these lakes famous, which has attracted thousands of wanderers ever since the time of the Romans, and caused villas and palaces to rise on their shores: it is their incomparable beauty. And, indeed, there are few spots in Europe which bear comparison with the delightful Gulf of Pallanza, over which are scattered the Borromean Islands, or with the peninsula of Bellagio, which may be likened to a hanging garden suspended within sight of the snow-clad Alps, and affording a prospect of the rock-bound shores of the Como Lake, cultivated fields, and numerous villas. Perhaps even more delightful is the peninsula of Sermione, jutting out into the azure waters of the Garda Lake, like the tender stalk of a flower developing into a many-coloured petal.

Most of the lakes in the plain have been drained into the neighbouring rivers. The Lake of Gerondo, mentioned in mediæval records, has dwindled down into a small swamp, or *mosi*, now, and its populous island of Fulcheria has become merged in the plain of Lombardy. The lakes on the southern bank of the Po, above Guastalla, have likewise been drained; and if the two shallow lakes of Mantua still exist, this is entirely due to the embankments raised in the twelfth century. It would have been much better, and would have saved the city the horrors of many a siege, if these lakes had been allowed to disappear likewise.

The lagoons along the Adriatic have decreased in extent in the course of centuries, and whilst new lagoons are being formed, the old ones are gradually being converted into dry land. The old maps of the Venetian littoral differ essentially from our modern ones, and yet all the vast changes they indicate have been wrought in the course of a few centuries. The swamps of Caorle, between the Piave and the Gulf of Trieste, have changed to an extent which prevents us from restoring the ancient topography of the country; and if the lagoons of Venice and Chioggia exhibit a certain permanence of contour, this is only on account of the incessant interference of man. The ancient lagoon of Brondolo has been dry land since the middle of the sixteenth century. The large lagoon of Comacchio, to the south of the Po, has been cut up into separate portions by alluvial embankments formed by the agency of rivers and torrents. For the most part it consists now of *valli*, or alluvial deposits, but there still remain a few profound cavities, or *chiari*, which the rivers have not yet succeeded in filling up. Formerly these

* Volume of Adda and Ticino at their point of egress from the Alpine lakes, according to Lombardini:—

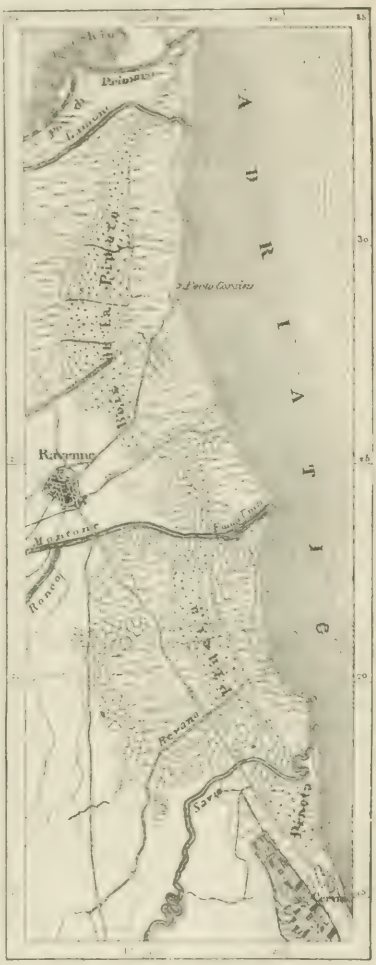
Adda.—Average 6,600, minimum 567, maximum 29,000 cubic feet per second. *Ticino.*—Average 11,400, minimum 1,770, maximum 77,400 cubic feet per second.

lagoons extended far to the south in the direction of Ravenna, and, according to Strabo and other ancient writers, that ancient city once occupied a site very much like that of Venice or Chioggia in our own days.

There can be no doubt that these lagoons were anciently separated from the Adriatic by a narrow strip of land over 120 miles in length, and similar to what we still meet with on the coasts of Carolina and of the Brazils. This ancient barrier still exists in the *lidi* of Venice and Comacchio, which are pierced at intervals, admitting the vivifying floods of the open sea. Elsewhere the traces of this ancient beach must be looked for on the mainland. The low delta of the Po is traversed from north to south by a range of dunes constituting the continuation of the lidi of Venice, and extending into the swamps of Comacchio, where they form a natural embankment running parallel with the coast. These dunes, between the Adige and Cervia, are covered with sombre pine woods, replaced here and there by oaks. The underwood mainly consists of hawthorns and juniper-trees, and wild boars still haunt it.

No sooner have the lagoons protected by these barriers been converted into dry land than the sea seizes upon the sand, and forms it into new curvilinear barriers similar to the former ones. The principal range of dunes to the east of Ravenna, which is about 20 miles in length, and varies in width between 50 and 3,300 yards, has thus two other ranges of dunes running parallel with it, one of them being still in course of formation. Signor

Fig. 41.—Beach and Pine Woods of Ravenna.
Scale 1 : 247,000



Pareto has estimated the annual advance of the land at 7½ feet, and at much more near the mouths of rivers.

The sea thus marks by a series of barriers its successive recoils. Sometimes, however, the sea gains upon the land in consequence of a gradual subsidence of the Venetian shore, the cause of which has not yet been elucidated. Thus the gravel bank of Cortellazzo, opposite the swamps of Caorle, appears to have anciently been a *lido* which has sunk nearly 70 feet below the level of the sea. The islands which fringed the littoral of Aquileja during the Middle Ages have almost wholly disappeared. In the time of the Romans these islands were populous; there were forests and fields upon them, and the inhabitants built ships. The chronicles of the Middle Ages tell us that the Doge of Venice and the Patriarch of Aquileja hunted stags and wild boars upon them, much to the scandal of the inhabitants. At the present day the dunes which of yore protected these islands have almost wholly disappeared, the forests have been supplanted by reeds, and Grado is the only place on the littoral which may still boast of a certain number of inhabitants. Piers, walls, mosaic pavements, and even stones bearing inscriptions, which are found occasionally at the bottom of the sea or of swamps, prove that the mainland was formerly more extensive there. Farther to the west the littoral of Venice bears evidence of a similar subsidence. Artesian wells sunk in the city of the lagoons have led to the discovery of four beds of turf, the deepest no less than 420 feet below the level of the sea. The subterranean church of St. Mark has within historical times been converted into a submarine church, and streets and buildings are gradually sinking beneath the waters of the lagoons. If it were not for the alluvium brought down by the rivers, the sea would continually encroach upon the land. Ravenna, too, participates in this subsidence, which Signor Pareto estimates to amount to 0·60 inch in the course of a century.

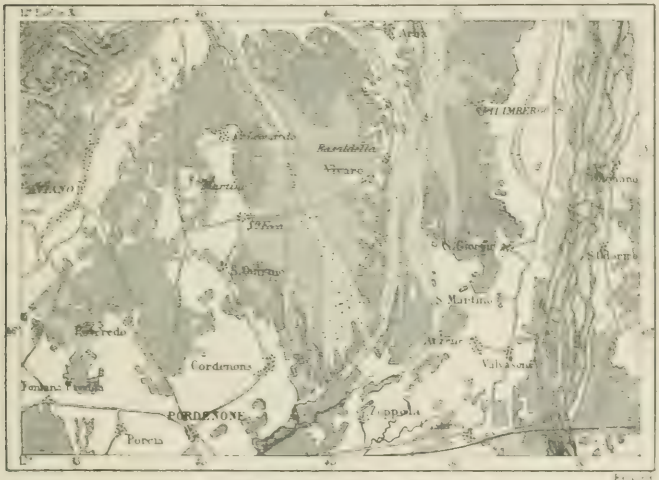
Amongst the geological agents constantly at work to modify the surface of the earth, the rivers and torrents irrigating the plain lying at the foot of the Alps are the most active, and no other country of Europe, Holland alone excepted, can compare in this respect with Northern Italy.

The torrent of Isonzo offers one of the most striking instances of these geological revolutions. It is said to have formerly communicated through subterranean channels with the Istrian Timavo, and that its existence as a separate river does not date very far back. Ancient writers do not enumerate the Isonzo amongst the rivers flowing into the Adriatic. It is first mentioned in a document of the sixth century as a river irrigating some inland valley. On Peutinger's Table we meet with a station, Ponte Sonti, far to the east of Aquileja, and near the sources of the Timavo. The chronicles are silent with respect to the peripatetics of this river, but a careful examination of the surrounding hills justifies the assumption that the valley of Tolmein, on the Upper Isonzo, was formerly a lake which overflowed towards the north-west through the narrows of Caporetto, and that its pent-up waters found their way through the Natisone into the Adriatic. Subsequently they opened themselves a passage to the south, and another lake was

formed at the confluence of Isonzo and Wippach. This lake communicated by subterranean channels with the Timavo, but it has now disappeared, and the Isonzo flows directly into the sea, its bed wandering continuously towards the east. The alluvium carried down by this river has formed the peninsula of Sdobba, and joined several old islands to the mainland.

The Tagliamento is even a more active geological agent than its neighbour just beyond the frontier. The débris deposited at the mouth of the narrow gorge in which it rises covers many square miles of a once fertile plain. In summer its waters trickle through these accumulations of shingle, but after heavy rain the river is converted into a powerful torrent several miles in width, and all the more formidable as its bed lies higher than many parts of the surrounding country. The Meduna and Zelline, to the west of the Tagliamento, are equally destructive,

Fig. 65.—Shingle Beds of the Tagliamento, the Meduna, and Zelline.
From the Austrian Staff Map. Scale 1 : 75000.



Shingle Beds. Meadows. Pastures.

5 Miles.

and an extensive tract at their confluence is covered with shingles. Lower down, in the lagoons, these torrents have thrown up huge embankments of sand on either side of their ancient beds. The alluvium brought down by these torrents to the sea is in every instance deposited to the west, a circumstance accounted for by the direction of the coast current.

The Piave, the most considerable river to the east of the Adige, is likewise a most active geological agent, converting fertile fields into sterile shingle tracts, filling up swamps, and carrying large quantities of matter into the sea. At its

mouth the land gains rapidly upon the sea, and Heraclea of the Venеti, now known as Cittanova, which was a seaport once, at the present time lies far inland.

The Piave was formerly supposed to have changed its bed in the same manner as the Isonzo. Below the Capo di Ponte, a wild defile in the Dolomite Alps, the Piave flows towards the south-west, past Belluno, and lower down is joined by the Cordevole. It was, however, supposed that the river originally flowed through the valley of Rai, immediately to the south of the Capo di Ponte, and that the Meschio and Livenzo constituted its lower course. Earthquakes or landslips were supposed to have created a barrier across that valley, and the small lakes still seen there were looked upon as remains of the ancient river bed. But M. de Mortillet has shown

Fig. 66. – The supposed Old Bed of the Piave.
From the Austrian Staff Map. Scale 1 : 550,000.

10 Miles.

that this hypothesis is untenable, for the barrier referred to is merely the moraine of an ancient glacier, and there exist no traces whatever of landslips.

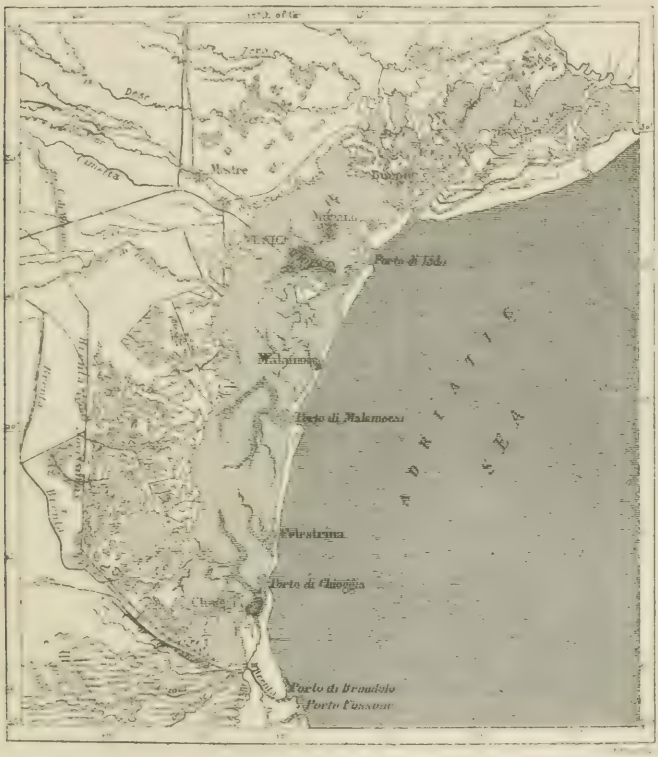
At the same time it cannot be doubted that extensive changes have taken place in the basin of the Piave. Thus in 1771 the course of the Cordevole, its most important tributary, was obstructed for a time by a landslip which carried the verdant terraces of Pezza down into the valley. Two villages were destroyed, and two others overwhelmed by the rising floods of the river.

The Brenta, which rises in the beautiful Sugana valley of the Tyrol, has at all times been a source of anxiety to the Venetians on account of its irregularities. Formerly it entered the lagoons at Fusina, and its alluvium filled up the canals

VENICE.

and infected the air. The Paduans and other inhabitants of the lowlands were anxious to divert it by the most direct course into the lagoons, so as to avoid inundations, whilst the Venetians were solicitous to get rid of a river which threatened to fill up their lagoons and render them insalubrious. These conflicting interests gave rise to numerous wars. The possession of the coast became a question of existence to the Venetians, and no sooner had they obtained it than

Fig. 67.—The Lagoons of Venice.
Scale 1 [illegible]



they set about "regulating" the Lower Brenta. By means of two canals, the Brenta Nuova, or Brentone, and the Brenta Nuovissima, the river was conducted right round the lagoons to the port of Brondolo, a few miles to the north of the Adige. But the river, whose course had thus been considerably lengthened, gradually filled up the bed in its upper course, and it was found impossible to

confine it within its lateral embankments. They were broken through by the floods no less than twenty times between 1811 and 1859, and, as the channel of the river became more and more choked, a more frequent recurrence of such disasters was naturally expected. It was then resolved to shorten the course of the river to the extent of ten miles, by diverting it into a portion of the lagoon of Chioggia. The danger of irruptions has thus been averted for a time, but the fisheries of Chioggia have been completely destroyed, and fever is a frequent visitor in the towns of the littoral.

There can be no doubt that but for the efforts of the Venetian engineers the lagoons of the Lido, Malamocco, and Chioggia would long ago have been converted into dry land. Venice has at all times been alive to the necessity of preserving its precious inland sea. The Venetian engineers were not content with turning aside the torrents which formerly poured their waters into the lagoons; they have also, by means of canals, moved the mouths of the Sile and Piave to the east, thus securing the ports of the Lido from the dreaded alluvium of the rivers. They even conceived the gigantic project of a huge encircling canal for the interception of all the Alpine torrents between the Brenta and Isonzo. This project, however, has never been carried out. The débris carried southward by the coast current has silted up the port of the Lido, which was abandoned towards the close of the fifteenth century, when a new military port was constructed eight miles farther south, at the canal of Malamocco, and it is now protected by a pier extending 7,200 feet into the sea.

The torrents which descend from the slopes of the Apennines to the south of the delta of the Adige and Po are as erratic in their course as those of Venetia. The Trebbia, the Taro, and other rivers irrigating the districts of Piacenza and Parma only cross a narrow plain between the mountains and the Po, and do not much modify the topography of the country. But this cannot be said of the rivers flowing through the vast plains of Modena, Bologna, Ferrara, and Imola. They are constantly changing their beds, and the remains of embankments met with all over the country prove that all efforts to confine them permanently have proved abortive. Modena itself was once destroyed by the floods of the Secchia. The Tanaro, the Reno, and other rivers flowing towards the north-west, either into the canal encircling the lagoons of Comacchio or direct into the sea, all have a history attached to them; they are blessed for their fertilising alluvium, cursed on account of their destructive floods. One of them, probably the Fiumicino, is the famous Rubicon which bounded the Italy of the Romans, and which was crossed by Cæsar when he pronounced the fatal words, "Alea jacta est."

The Reno is the most erratic, the most dangerous of all these Apennine rivers. The bed of débris deposited by it in the plain measures 20 miles across from east to west. Its volume varies between 35 and 49,500 cubic feet a second, according to the season, and its bed is in places no less than 30 feet above the adjoining country. The destruction of the forests has augmented the danger of its inundations. The engineers, puzzled by its irregular floods, have proposed the most

opposite plans for subduing this terrible scourge. The river has been turned into the Po; then eastward, direct into the sea. Recently it has been proposed to divert it to the lagoons of Comacchio. But all these diversions are attended with disadvantages, and whilst the inhabitants of one district congratulate themselves upon having got rid of so troublesome a neighbour, those of another complain of its inundations, see their fisheries destroyed, and their navigation interfered with.

Lombardini, the famous hydraulic engineer, has shown how we may discover the places to which the soil of the lowlands of Emilia has been conveyed by the torrents, and trace the ancient shores of the lagoon of Padua, now converted into dry land. A traveller following the Emilian causeway from Cesena to Bologna

Fig. 68.—Colonies of the Roman Veterans.
Scale 1 : 350,000.

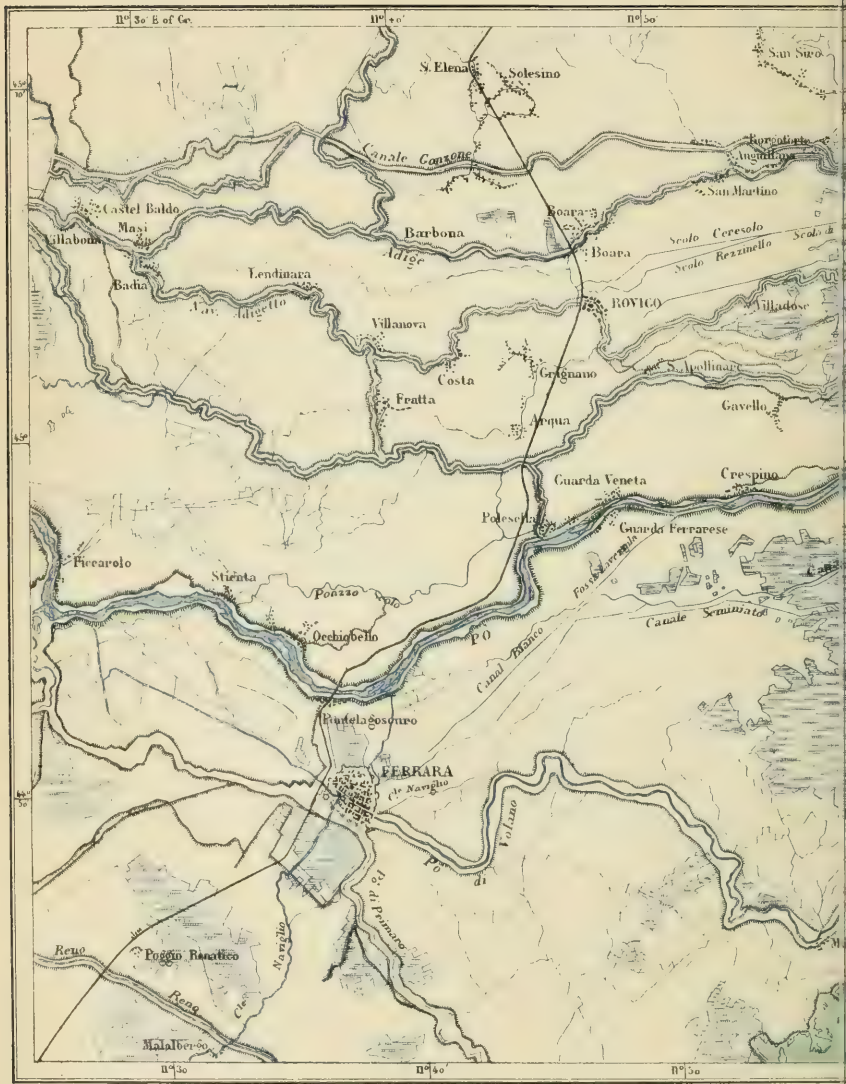
can hardly help noticing the quadrangular fields on his right, all of them of the same size. Looked at from the spurs of the Apennines, the plain resembles a huge draught-board, the squares of which are covered alternately with verdure and ripening crops. We learn from the topographical maps that these fields are exactly of the same size, and there can be no doubt that we have here before us the fields which, according to Livy, were taken from the Gauls and distributed amongst Roman military settlers. A sinuous line marks, in the direction of the Po, the shore of an ancient lake. The rectangular fields, laid out by the cadastral surveyors of ancient Rome, cease there, and we find ourselves again amidst the usual labyrinth of ditches and tortuous roads. This lake has been filled up long ago by the débris brought down by the torrents.

The Po, proportionately to the area it drains and its length, has undergone fewer changes than either the Piave or the Reno, but looking to the populous cities which line its banks, and to the fertility of its fields, the least of these is of some importance.

The torrent fed by the snows of Monte Viso is usually looked upon as the head stream of Father Po, as the ancient Romans called the river; but the Mastra, Varaita, and Clusone are quite equal to it in volume, and feed as many canals of irrigation. Indeed, these canals would quickly drain the Po if it were not for a bountiful supply of snow-water brought down by the Dora Riparia, the Stura, the Orca, and the Dora Baltea from the glaciers of the Alps. Lower down, the Po receives the Sesia from the north, and the Tanaro, which is fed by streams rising in the Apennines and the Alps. Then comes the Ticino, by far the most important tributary of the Po, "without which," as the river fishermen say, "il Po non sarebbe Po."

The Po, after its junction with the Ticino, exhibits no longer the features of a mountain torrent; the pebbles have been triturated into the finest dust, and no piled-up masses of débris are met with along its banks. If it were not for its dykes, or *argini*, it might spread itself freely over the plain. These artificial embankments rival those of the Netherlands, and date back to the most remote ages. Lucian refers to them as if they had existed from time immemorial. During the great migration of peoples they were allowed to decay, and only in the course of the ninth century were measures taken to restore them. In 1480 the great work had been achieved. Its importance may be judged from the fact that these embankments protect 3,000,000 acres of the most fertile land, yielding annually more than £8,000,000 sterling's worth of agricultural produce. Most of the towns have been built upon artificial platforms or terraces, and up to the beginning of this century they have never been known to suffer from floods; but whether owing to the devastation of the forests or to the closing up of all breaches in the dykes, the floods rise higher now than they did of yore, and it has been found necessary to throw up embankments around Revere, Sermide, Ostiglia, Governolo, Borgoforte, and other places.

Continuous embankments begin at Cremona, and they extend not only along both banks of the Po, but also along the lower course of its tributaries. The main dykes have a length of nearly 650 miles. In addition to these there are smaller dykes traversing the space between these *froldi*, or main dykes, in all directions, and enclosing willow plantations, fields, and even vineyards. In fact, the river extends to the foot of the main dykes only in a few localities. It is ordinarily only 650 to 1,600 feet wide, whilst the dykes are several miles apart, to allow the river to spread during the inundations. The land thus lying within the dykes has been divided by the villagers into *golene*, and is protected by smaller dykes against ordinary floods. The rules laid down for the construction of embankments have been drawn up in the general interest, and are sufficiently precise, but they are not always observed. The old system, embodied in the dreadful proverb, "Vita mia, morte tua," is not yet quite extinct. Formerly the peasants were in the habit of



Engr. by Erhard

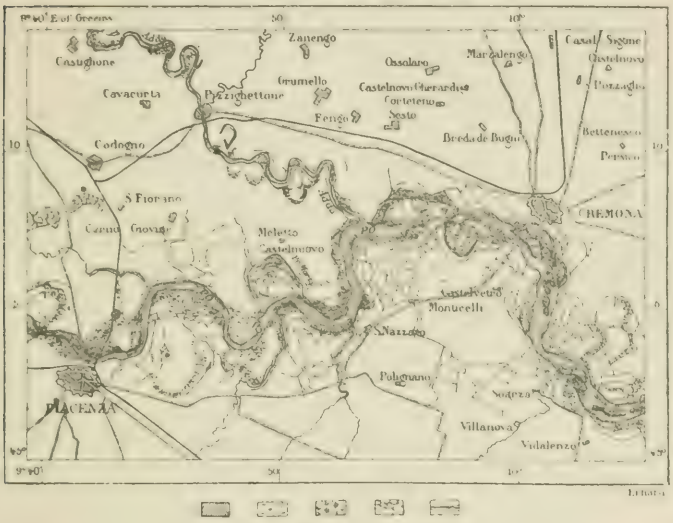
THE PO

Porto di Brondolo
Porto Fossone
Porto di Caleri
Porto Pozzatini
Porto di Levante
Porto Taffina
Pò delle Tolle
Canale del Canale
Canale di Valle
Canale di Cuneo
Cavarzere
Pottorazzi
Adige
Lorco
Adria
Bottrighe
Contarina
Mezzano
Corbola
Papozze
Isola d'Ariano
Villarena
Donzella
Ariano
Mesola
Canale Seminiale
Mezzogoro
Valli d'Ambrogio
Valli di Mezzogoro
Bosco Grande
Goro
Volano
Codigoro
Massa Fiscaglia
Migliaro
Valle Gallare
Lago Santo
Valle Trebba
Valle Ponti
Valle Isola
Valle del Mezzano

crossing over to the other bank, and deliberately cutting through the embankments there, thus saving their own crops by ruining their neighbours'.

The width of the bed of inundation enclosed between these embankments grows less in proportion as we descend the river, and in the case of the arms of the delta does not exceed 900 to 1,600 feet. This is not sufficient to enable the waters to escape during extraordinary floods, when they sometimes rise 25 and even 30 feet. Besides, it frequently happens that the villagers fail to keep the embankments in thorough repair, and sometimes entire districts are ruined because the mole-tracks were not stopped up. A breach in the embankment, unless

Fig. 69.—The Po between Piacenza and Cremona.
From the Austrian Staff Map. Scale 1 : 325,000.



Meadows. Swamps. Woods. Rice-fields. Canals and Dykes.

5 Miles

quickly filled up, produces untold misery. The crops are destroyed, the villages levelled with the ground, the soil is torn up and carried off, and the inhabitants are swept away by famine and its fearful attendant, typhus fever. These great floods of the Po and the earthquakes of Calabria are the two plagues of Italy. In 1872 1,200 square miles between the Secchia and the sea were converted into a lake. Two years afterwards there still remained pools of water.

In these great disasters the inhabitants are afforded an opportunity of exhibiting their valour, and it is always the most energetic who succeed in protecting their property from being washed away by the floods. During the flood just referred

to, the inhabitants of the little town of Ostiglia fought successfully with the rising waters, whilst many of their neighbours succumbed. The town stands close to the *froldo*, and there is no second line of dykes to protect it. The dyke threatened to give way. The inhabitants at once set about throwing up a second barrier. All the able-bodied men of the place, 4,000 in number, turned out to work, headed by their mayor. They worked day and night, and, as the floods carried away the old dyke, the new one rose in its rear. The victory was won; the floods retired, and their houses were safe.

Some of these breaches in the dykes have led to permanent changes in the course of the river, and these divagations have been most considerable in the delta. During the time of the Romans, and up to the thirteenth century, the Po di Volano was the principal branch of the river, whilst now it has dwindled down to an insignificant ditch which can hardly be traced through the swamps of Comacchio. Two other branches, farther to the south, are used now as carriage roads. In the eighth century the Po di Primaro, which enters the sea to the north of Ravenna, took the place of these old channels. Another bifurcation ensued in 1152, when the embankment at Ficcarolo was destroyed, it is said, by the people living above that town, and the main channel of the river, the Maestra, deserted the walls of Ferrara in the midst of its swamps, and united itself with the channels of the Adige. Breaches in the embankments usually take place in October or November, and generally at the same places. The danger is always greatest at Corbola, where the Po di Maestra bifurcates.

The Adige is quite as great a wanderer as the Po. Scarcely has that river left its defile, or *chiusa*, of calcareous mountains and the fortifications of Verona than it begins its erratic course over the plain. In the time of the Romans the Adige flowed much farther to the north, along the foot of the Euganean Hills, and entered the sea at Brondolo. In 587 the river broke through its embankments, and its main branch took the direction which it maintains up to the present day, entering the sea at Fossone. But new channels opened repeatedly towards the south, until the Adige and Po conjointly formed but one delta. The Polesina of Rovigo, between the two rivers, and that of Ferrara, are low tracts of alluvial land. The courtyard of the Castle of Ferrara, which occupies one of the most elevated sites in these plains, is nine feet lower than the highest level of the Po when flooded.

The frequent inundations caused by the Po and the numerous changes of its bed, by spreading the alluvium all over the country, have raised the whole of the plains to about the same level. But now, when all the arms of the Po are confined within embankments, most of the alluvium brought down by the floods is deposited on the coast of the Adriatic. The land, therefore, gains much more rapidly upon the sea than it did formerly. The series of dunes marking the ancient shore now lies fifteen miles inland, and the new land formed annually is estimated at 280 acres. In exceptional years the quantity of solid matter carried by the river into the sea amounts to 3,531,000,000 cubic feet; on an average it is 1,623,000,000 cubic feet, sufficient to form an island ten square miles in area in ten feet of water. The Po, next to the Danube, is the most active geological agent amongst all the rivers

entering the Mediterranean.* The Rhone is inferior to it, and so is the Nile. At the present rate of progress, the Po, in the course of a thousand years, will throw a tongue of land six miles wide across the Adriatic, converting the Gulf of Trieste into an inland sea.

Northern Italy, in addition to these numerous rivers, possesses one of the most extensive systems of canals in the world, which has served as a pattern to all the rest of Europe. Lombardy, portions of Piemont, the Campagna of Turin, the Lomellina on the Ticino, and the Polesinas of Ferrara and Rovigo possess a wonderful ramification of irrigation, which carries fertile alluvium to the exhausted fields. In the Middle Ages, when the remainder of Europe was still shrouded in darkness, the Lombard republics already practised the art of irrigation on the vastest scale, and drained their low-lying plains. Milan, after she had thrown off the yoke of her German oppressors, towards the close of the twelfth century, constructed the *Naviglio Grande*, a ship canal derived from the Ticino, thirty miles distant—probably the first great engineering work of the kind in Europe. In the beginning of the thirteenth century the superabundant waters of the Adda were utilised in filling the Muzza Canal. The same river, at a subsequent period, was made to feed another canal, the Martesana, which was constructed by the great Leonardo da Vinci. The art of surmounting elevations of the ground by means of locks had been discovered by Milanese engineers about a century before that time, and was applied to the construction of secondary canals. Amongst works of more recent date are the *naviglio* from Milan to Pavia; the Cavour Canal, fed by the Po, below Turin; and the Canal of Verona, derived from the Adige.†

Not only the rivers of Northern Italy, but also the springs, or *fontanelli*, however small, which burst forth at the foot of the Alps, are utilised for purposes of irrigation. Virgil alludes to these springs in his Bucolics, where he says, "Children, stop the water; the meadows have drunk enough." Lombardy is indebted to these springs for her fine prairies, or *marcite*, which sometimes yield eight crops a year. The great Adriatic plain has indeed undergone vast changes through the work of man. Originally it was a swamp surrounded by forests and heaths, but is now one of the best-cultivated countries of Europe. One of its great features consists in plantations of mulberries, the uniformity of which is relieved in many districts—and especially in the Brianza of Como, that

* Principal rivers of Northern Italy:—

	Length. Miles.	Area of Basin. Sq. Miles.	Volume in Cubic Feet per Second. Maximum.	Minimum.	Average.
Isonzo	80	1,235	—	—	4,240?
Tagliamento	105	800	—	—	5,300?
Livenza	72	795	25,400	—	1,400?
Piave	134	2,010	—	—	11,300
Sile	37	510	1,550	350	700?
Brenta	105	1,510	30,000	137	1,930
Bacchiglione	74	187	320	—	1,270
Adige	246	8,648	85,000	70	16,950
Po	416	26,799	182,550	550	60,700
Reno	112	1,930	56,500	35	8,300

† Average volume of the canals of the valley of the Po (cubic feet per second):—Muzza, 2,153; Naviglio Grande, 1,860; Canal Cavour, 1,482; Martesana, 918 cubic feet.

garden of Italy—by groups of tall trees, little lakes, and sinuous valleys. There still remain extensive heaths covering the moraines of ancient glaciers, which become more and more sterile from year to year; but the engineers are considering schemes for irrigating them by means of the fertilising waters of the Alpine lakes.

The irrigated area in the valley of the Po nearly amounts to 5,000 square miles, and the water it absorbs every second is estimated at 25,000,000 cubic feet, equal to about one-third of the volume of the Po. If the proposed works of irrigation are carried out, the Po, which now plays so important a part in the economy of the country by its floods and alluvial deposits, will be reduced to the dimensions of a small river.

The evaporation from the numerous rivers and canals of the country fills the air with moisture. Rains are less frequent than on the Atlantic coasts of England and France, but the clouds, driven by southerly winds against the cool slopes of the Alps, discharge themselves in torrents. The quantity of rain that falls in the upper Alpine valleys equals that of the most humid districts of Portugal, the Hebrides, and Norway, and the rainfall in the plains of Lombardy is equal to that of Ireland. The annual rainfall in the basin of the Piave is estimated at five feet, exclusive of what may evaporate or be absorbed by plants. These rains are not confined to certain seasons, though it has been observed that they are most abundant in May and October, and least so in February and July.*

As regards the direction of the winds, the great plain bounded by the Apennines and the Alps resembles an Alpine valley, the winds either blowing up it from east to west, or in an inverse direction. The winds descending from the Alps rarely bring rain, for they have deposited their moisture on the western slopes, but those coming from the Adriatic are generally charged with moisture. Nevertheless, owing to the great extent of the plains and the numerous breaks in the mountain chains, this rule is frequently interfered with. In the Alpine valleys the ascending and descending currents are far more regular, and the navigators on the lakes fully avail themselves of this circumstance.

The forty-fifth degree of north latitude intersects the valley of the Po, but the climate, nevertheless, is not as mild as might be expected from this circumstance, and the range of temperature is great. In the Val Tellina the temperature sometimes rises above 90°, and frequently falls below freezing point. In the plain the climate is less austere, but it is notwithstanding continental in its character; and Turin, Milan, and Bologna are for this reason the least pleasant cities of Italy to live in. A few favoured spots on the Alpine lakes, such as the Borromean Islands, are an exception to this rule, and enjoy an equable climate, thanks to the moderating influences of a vast expanse of water. In the Gulf of Pallanza the thermometer never falls below 40° F., and we must go as far as Naples if we would meet with a climate equally favourable to vegetation. Venice, too, is a privileged spot, thanks to the vicinity of the Adriatic, and is healthy, too, in spite of the lagoons

* Humidity of the air at Milan, 74·5 per cent.; annual rainfall at Milan, 38·8 in.; at Turin, 31·8 in.; at Tolmezza, on the Upper Tagliamento, 82·3 in.

which surround it. It is remarkable that these brackish lakes and swamps of Northern Italy do not give rise to the dreaded malarial fevers. Venice undoubtedly owes its healthiness to the tides, which are higher there than in the Tyrrhenian Sea, and perhaps, also, to the cold winds descending from the Alps. Comacchio, too, is a healthy place, and young natives of the Polesina suffering from consumption are sent there to recover their health. Wherever the engineers have cut up the connection between the lagoons and the open sea, marsh fever has made its appearance. The swamps of Ravenna and Cervia breed malignant fevers, especially where avaricious landowners have cut down the protecting rows of pines and oaks. A heavy miasmal air hangs likewise over the environs of Ferrara and Malalbergo, at the head of the Paduan delta.

The Alpine valleys are the most unhealthy spots of Northern Italy, for they are deprived of sunlight. Goitre and idiotcy are frequent there, and in the valley of Aosta nearly all the women are afflicted with the former, owing, perhaps, to the water which flows over magnesian rocks. The inhabitants of districts traversed by numerous canals suffer from diseases traceable to miasmal effluvia. The food of the peasantry is not sufficiently nourishing or varied to counteract these deleterious influences, and many die of *pellagre*, an incurable skin disease, only known in countries where the flour of maize, in the diluted form of *polenta*, constitutes the principal article of food. In the province of Cremona one in every twenty-four inhabitants is afflicted with this malady. The sanitary condition of the people is even worse in the rice-fields of Milan and the Polesina. The women there frequently stand for hours in tepid putrefying water, and are obliged from time to time to pick off the leeches which creep up their legs.*

But in spite of maladies, misery, and famines, always following in the train of the inundations, the fertile plain of the Po is one of the most densely peopled portions of Europe. Every plot of ground there has been utilised. The forests, very much reduced in size, harbour no game, except, perhaps, on the Alpine slopes, and even small birds are rare. Not only snipes, quails, and thrushes are shot or trapped, but also nightingales and swallows. Tschudi estimates the number of singing birds annually killed on the shores of the Lago Maggiore at 60,000; and at Bergamo, Verona, Chiavenna, and Brescia they are slain by millions, the nets being spread in the hedges of every hill.

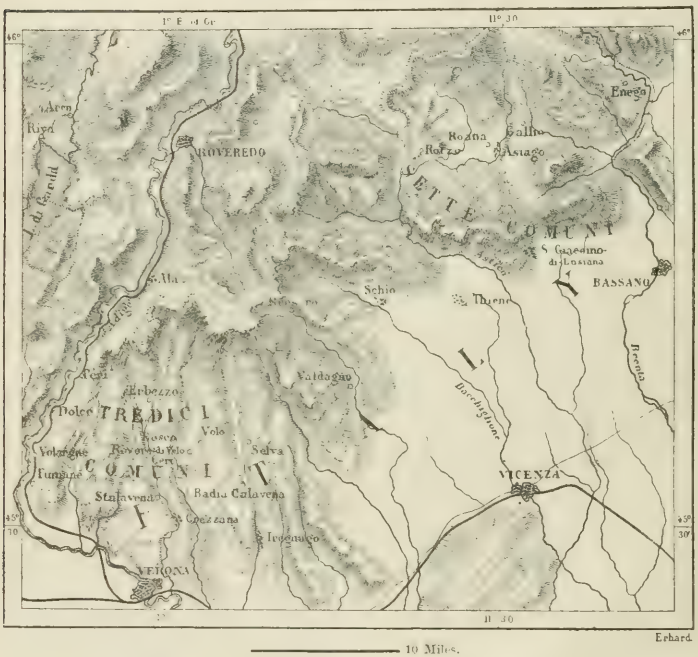
The population of the valley of the Po is composed of the most diverse elements. Amongst its ancestors were Ligurians, probably the kinsmen of our Basks; Etruscans, famous for their works of irrigation; Gallic tribes, whose peculiar intonation is still traceable in the rural Latin spoken in Northern Italy; and Celtic Ombrians, the most remote of all, and looked upon by historians as the aboriginal inhabitants of the country.

The German invasions during the first centuries of our era have left a perma-

* Mean annual temperature of Turin, 55·10° F.; hottest month (April), 73·13°; coldest month (January, 35·10. Milan: mean, 54·04, July, 74·84; January, 35·26. Venice: mean, 55·52 F.; July, 25·06°; January, 35·28°.

nent mark upon the population of Northern Italy. The many tall men met with in the valley of the Po are proofs of this Transalpine influence. The Goths and Vandals, Herulians and Longobards, or Lombards, soon became merged in the Latinised masses, but their position as conquerors and feudal lords gave them an influence which their mere numbers would not have insured them. The ancient history of Lombardy is a continual struggle between the towns and these feudal lords, and as soon as the latter had been defeated—that is to say, about the beginning of the tenth century—German was superseded everywhere by Italian.

Fig. 70.—The German Communes of Northern Italy.
Scale 1 : 650,000.



Family and topographical names of Lombard origin are very common on the left bank of the Po, and as far as the foot of the Apeninnes. Marengo, for instance, is a corruption of the German Mehring.

This German influence upon manners and language has been most enduring in the Friuli, or Furlanei, a district bounded by the Adriatic, the Carniolan Alps, and the plateau of the Karst, or Carso. The Friulians were even looked upon as a distinct race, though their ancestors, like those of most Italians of the north, were Latinised Celts. Frequent intermarriages with their Slovenian neighbours con-

tributed in some measure to produce a type distinct from that of Venice or Treviso. The number of these Friulians still speaking their own dialect does not now exceed 50,000 souls.

Amongst the numerous German colonies of which traces have been found in the plains of Northern Italy and on the southern slopes of the Alps, the "Thirteen Communes" to the north of Verona, and the "Seven Communes" in the deep valleys to the north-west of Bassano, are the most considerable. The *homines*

Fig. 71.—Monte Rosa, as seen from Galcoro.

Teutonici of these two districts are supposed to be the descendants of the Cimbrians defeated by Marius, and blue eyes and fair hair still prevail amongst them, but in all other respects they resemble the Italians of the plains, and only a few old women amongst them still talk the language of their ancestors, which is said to resemble the dialect spoken on the Tegern Lake, in Bavaria. Nor were they the champions of German authority on Italian soil. On the contrary, they were charged by the Republic of Venice with the defence of the northern frontier, and

have always valiantly acquitted themselves of this duty. In return, they were granted self-government and exemption from military service. But neither the Republic of Venice nor Austria was able to protect these German colonies against an invasion of the "Welsh" or Italian element, and there do not now exist any non-Italian communities to the east of the great lakes. To the north of Piemont, however, in the valleys descending from Monte Rosa and in the valley of Pommat, where the Toce forms one of the most beautiful waterfalls, German colonies still maintain their ground. They, too, would long ago have lost their language were it not for the support they receive from the Germans occupying the Swiss valleys on the northern slopes of the Alps. Alagna, or Olen, one of these German villages, preserved its ancient customs until quite recently. For centuries there had been no lawsuit there; contracts, testaments, and other legal documents were unknown; and everything was regulated by "custom;" that is, by the absolute authority of the heads of families.

The French element is far more numerous on the Italian slope of the Alps than the German. The inhabitants of the valley of Aosta, between the Grand Paradis and the Monte Rosa, of the upper valleys of the Dora Riparia, Cluson, Pelice, and Varaita, speak French, and are of the same origin as the Savoyards and Dauphinois on the western slope of the Alps. The configuration of the ground has facilitated this pacific invasion of the western Celts, numbering about 120,000 souls. They descended from the passes, and occupied the whole of the forest and pastoral region down to the foot of the hills, the last mountain defile, in many instances, forming their boundary. But the French language is steadily losing ground, for the official language is Italian, and every village has already two names, of which the modern Italian one is used by preference. The Vaudois, or Waldenses, in the valleys of Pelice (Pellis) and Cluson, above Pinerolo (Pignerol), alone resist this Italianisation with a certain amount of success, for they have a literature and history, and are held together by strong religious ties. Their sect was persecuted as early as the thirteenth century, long before the Reformation, and ever since, until their final emancipation in 1848, they have struggled against adversity. Many times it was thought they had been exterminated, but they always rose again, and in history they occupy a rank far out of proportion to their small numbers.

The bulk of the population are engaged in agriculture, which need not be wondered at if we bear in mind the fertility of the soil, the abundant supply of water, and the improvements effected in bygone ages. The labour invested in every kind of agricultural improvement, such as canals, embankments, terraces, or *ronchi*, built up like steps on the slope of every hill, has been immense, and defies computation. The mode of cultivation, moreover, entails a vast amount of labour, for the peasant knows not the iron plough, but tills his field with the spade: he is a gardener rather than an agriculturist. The agricultural produce is immense; its annual value is estimated at £80,000,000 sterling, and it furnishes large quantities for exportation. Cereals, forage, mulberry leaves and cocoons, vegetables and fruit, and cheese, including the famous Parmesan, are the principal products.

Lombardy and Piemont occupy the first rank in the world for certain kinds of agricultural produce, and they are almost the only countries in Europe in which rice, introduced in the beginning of the sixteenth century, is extensively grown. The vineyards, on the other hand, are not as carefully tended as they might be, and the wines, with the exception of those of Asti, Monferrato, San Colombano, and Udine (the *picolito*), are of small repute.

The valley of the Po divides itself into several well-marked agricultural provinces. In the Alpine valleys, between Col di Tenda and Monte Tricorno, the greater portion of the forests and pastures is held in common, but nearly every mountaineer is likewise the free proprietor of a bit of meadow or land, which his labour has converted into a garden. The social condition of these mountaineers thus resembles that of the French peasantry: for they, likewise, enjoy the advantages of a minute division of the land amongst freehold proprietors. The hilly tracts along the foot of the mountains are divided into farms of moderate size. The peasant no longer owns the land, but, in accordance with old feudal customs, he shares in its produce. In the plain, where it is necessary to keep up a complicated system of canals, nearly all the land belongs to rich capitalists, who cut it up into numerous small farms, and for the most part reside in the towns. These small farmers have no resources of their own, and are hardly above the rank of agricultural labourers. Though they cultivate the most fertile region of Northern Italy, they are miserably fed, frequently decimated by disease, and least alive to the advantages of education. The contrast between these miserable peasants and the mountaineers of Vaudois and the Val Tellina is great indeed.

Periodically many of the mountaineers migrate to the towns and neighbouring countries in search of work, and a proverb tells us that there is no country in the world "without sparrows or Bergamosks." But though the natives of the hills of Bergamo furnish a numerous contingent of these migrants, they are outnumbered by Friulians, inhabitants of the shores of the Lago Maggiore, and Piemontese. The latter cross the passes of the Western Alps in large numbers in search of work at Marseilles and other towns of Southern France, and, small wages sufficing for their frugal wants, they are not particularly liked by their French fellow-workmen.

The metallic wealth of Northern Italy is but small. The only mines of note are those which formerly supplied the famous armourers of Brescia with iron, and the gold diggings of Anzasca, at the foot of Monte Rosa, where 5,000 slaves were kept at work by the Romans, and which are not yet quite exhausted. Marble, gneiss, granite, potters' clay, and kaolin are, however, found abundantly. In former times silks, velvets, carpets, glass, porcelain, metal-work, and other art productions of the workmen of Venice and Lombardy enjoyed a very high reputation. These ancient industries decayed with the downfall of the old republics, but there are signs now of their revival. The want of coal or other fuel for setting in motion the machinery of modern factories is compensated for, to some extent, by an abundant water power, and this explains why nearly all the important manufactories are met with at the debouchures of the Alpine valleys.

Amongst the ancient industries of the country not yet extinct, the fisheries of the lagoons of Comacchio occupy a foremost place. The Canal of Magnavacca, now hardly navigable, admits the waters of the sea into the Canal Palotta, which may be described as the great artery of these lagoons. It was constructed in 1631—34, and, by an ingeniously designed system of ramifying canals, carries the vivifying floods to the most remote parts of the lagoons. The various basins, or *valli*, of the lagoons are thus filled with sea-water, and constitute as many

Fig. 72.—The Lagoons of Comacchio.
Scale 1 : 2[illegible],

breeding beds, where the fish come from the sea multiply abundantly. A labyrinth of canals provided with flood-gates cuts off their retreat to the sea, and they are caught in immense numbers when the fishing season arrives. Spallanzani has seen 60,000 pounds of fish taken in a single bed, or *valle*, within an hour; but sometimes the draught is even more considerable, and the fish are actually used as manure. The fishing population of Comacchio numbers about 5,000 individuals, most of them distinguished by tall stature, great strength, and suppleness. Coste, the fish-breeder, mentions it as a curious fact that this secluded colony of fishermen

should have retained these characteristic features for centuries, though sustained exclusively by fishing, and living upon mullets, eels, and *capitoni*. Unfortunately these fishermen are not the proprietors of the ponds, for they belong to the State or to rich private individuals. The workmen live in large barracks away from the town, to which they return only at stated intervals, and even their wives and relatives are not permitted to visit them in their places of exile.

FIG. 73.—THE ENVIRONS OF COMACCHIO.
Scale 1 : 75,000.

2 Miles.

The enormous population of the valley of the Po, which almost equals that of the remainder of continental Italy, is very unequally distributed; but, except in the high and cold Alpine valleys, the inhabitants live in towns, dozens of which may be seen peeping out amidst the verdure if we ascend a high tower. There are scarcely any villages or hamlets. The farmers alone live in the country, completely isolated from each other, whilst the numerous landed proprietors throng the towns, and impart to them an aspect of wealth which similar places in other

parts of Europe cannot boast of. No other country in the world is as densely populated, and in Lombardy the number of towns is relatively larger than anywhere else.*

Large towns, too, are numerous, and many of them enjoy a deserved reputation amongst the cities of the world on account of their monuments, art treasures, and historical associations. Their number is partly accounted for by the density of the population, and by the facility with which the inhabitants were able to shift their abodes, according to the hazards of war or the vicissitudes of events. And this accounts, too, for the large number of towns which became famous as the capitals of republics, or as royal and ducal residences.

Several of the towns at the base of the Alps occupy sites marked out for them by nature. Such are the towns at the mouths of the valleys or defiles, which were places of defence as well as staples of commerce. Ariminum, the modern Rimini, at the southern extremity of the great plain of the Po, was one of these, for during the reign of the Roman it defended the narrow littoral passage between the Adriatic and the Apennines. The Flaminian Road there reached the sea, the Emilian Road thence departed for the north-west, as did also the littoral road of Ravenna. When Rome had ceased to be the capital of the world, and Italy was divided into small hostile states, the towns in the southern part of the plain, or near the passes over the Po, such as Ferrara and Bologna, retained their strategical importance. Piacenza, which defends the passage of the Po between Piemont and Emilia, remains a first-rate fortress to the present day; Alessandria, near the confluence of the Tanaro and Bormida, and in a plain famous for many a bloody battle, was likewise destined to become a formidable fortress, though derisively called a "city of straw." Every valley debouching from France or Austria was locked at its mouth by a strong fort; but most of these places, such as Vinadio, Pinerolo, Fenestrella, and Susa, have become untenable, owing to the range of modern artillery.

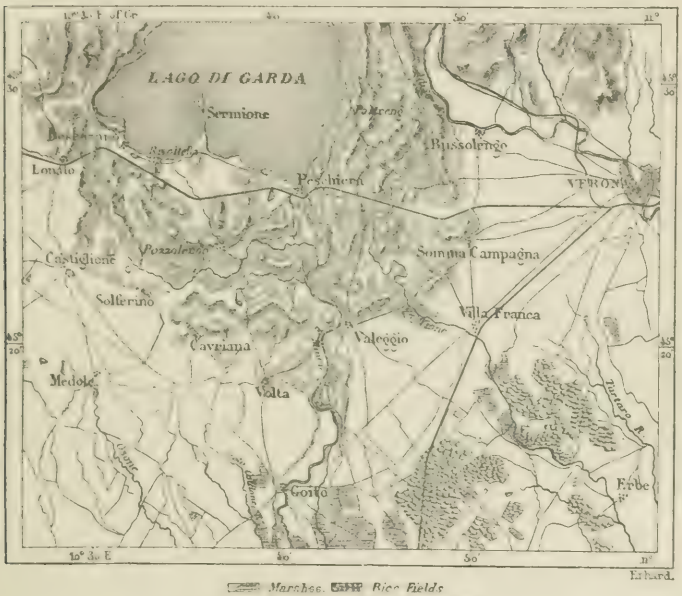
The defences of the road over the Brenner, ever since the downfall of the Roman empire, had to be looked to most carefully, for the plain between the Mincio and the Adige, to the south of the Lake of Garda, is the least-protected part of Italy from a military point of view. History has proved this. Well might the peaceable inhabitants of the plain consecrate this Alpine road to the gods, and intrust its defence to the neighbouring tribes. But the northern barbarians were not to be stopped by altars; and many a time they swept down it like an avalanche, pillaging the towns and massacring the inhabitants. No spot on the earth's surface has been so frequently saturated with human blood. Most of the battles for the possession of Italy, down to our own days, were fought near the mouth of the upper valley of the Adige. Hardly a town or a village of this small district but

	Area, Square Miles. Dec. 31st, 1875.	Population.	Density.
* Piemont	11,308	2,995,213	265
Lombardy	9,084	3,553,913	391
Venice	9,060	2,733,406	302
Emilia	7,921	2,153,381	272
Total	37,373	11,435,913	306

has gained a mournful notoriety in the dark pages of human history. It is there we must seek for the battle-fields of Castiglione, Lonato, Rivoli, Solferino, and Custozza. When the Austrians held Lombardy and Venice, they took care to protect this district by the four fortresses known as the Quadrilateral (Verona, Peschiera, Mantua, and Legnago) and other works. These constituted the "key of the house," of which Italy has now repossessed herself.

The configuration of the country which rendered these defiles of the Alps of importance strategically, likewise insured their commercial importance. The fortresses were placed there to defend the passes, the commercial entrepôts to

FIG. 71. MOUTH OF THE ADIGE VALLEY.
From the Austrian Staff Map. Scale 1 : 864,000.



intercept the trade. The rank of these places of commerce depends essentially upon the number and the importance of the roads which converge upon them. Turin, upon which converge all the Alpine roads from Mont Blanc to the Apennines, naturally became one of the vital points of European commerce. Milan, to which lead the seven great Alpine routes of the Simplon, the Gotthard, the Bernardino, the Splügen, the Julier, the Maloya, and the Stelvio, was marked out by nature as a commercial emporium. Bologna, too, which was separated by the swamps of the Po from the Alpine passes, has risen into importance since railways have joined it to Vienna, Paris, Marseilles, and Naples.

The valley of the Po would never have attained its importance in the history of Europe unless roads had been constructed for traversing the obstructive mountains which surround it on all sides except towards the east, where it opens out upon the Adriatic. No other district of Europe is so completely hemmed in by natural obstacles as is this, but the construction of carriage roads and railways has converted Northern Italy into one of the great centres of European commerce. Venice gives it the command of the Adriatic, the Apennine railways connect it with Genoa, Savona, the Gulf of Spezia, and the Tyrrhenian, and it thus commands the two seas which wash the shores of Italy. Other railways cross the Alps, and put it into communication with France and Germany. This central position, joined to the natural fertility of the country, has converted Northern Italy into one

Fig. 75.—The Passages over the Alps.
Scale 1 : 6,000,000.

of the most flourishing portions of Europe. Human hands have conquered original geographical disadvantages, and the true centre of Italy is in the ancient Cisalpine Gaul, and not at Rome. Had the Italians been guided in the choice of their capital by actual importance, and not by historical tradition, they would have chosen one of the great cities of their northern plain.

Turin, though an old town, seeing that it was burnt by Hannibal, is nevertheless a modern city, if we compare it with other towns of Italy. Its straight and broad streets almost give it the appearance of a town of the New World. Until made a ducal residence, Turin was but a small provincial town. During the time of the Romans, and even during the Middle Ages, the great high-road between Italy and Gaul led along the coast of the Gulf of Genoa. The passage of the Alps was looked upon with dread by travellers. Still some traffic went on even in these

early days, and small towns sprang into existence at the foot of each Alpine pass. Amongst these were Mondovi, the triple town built on three hills; Cuneo, favourably placed upon a terrace between the Stura and Gesso, in which rise the hot sulphur springs of Valdiera; Saluzzo, on the gentle slope of the foot-hills of Monte Viso; Pinerolo, with its ancient castle, so often converted into a prison of state; Susa, the Italian key of Mont Cenis; Aosta, still abounding in Roman antiquities; Ivrea, built on a site formerly occupied by a glacier descending from Monte Rosa; and Biella, with its flourishing woollen industry. The towns lower down in the plain, upon which several of these Alpine roads converged, likewise attained some local importance. In Upper Piemont there are Fossano, on a heap of shingle at the junction of the roads of Mondovi and Cuneo; Savigliano, lower down, where the roads of the Po and Maira valleys join; and Carmagnola, which commands one of the principal roads over the Apennines. Novara, the commercial outlet of the Lago Maggiore, and in the midst of one of the most productive agricultural districts, is the most populous town of Eastern Piemont. Vercelli, on the Sesia, and below the confluence of the rivulets descending from Monte Rosa, enjoys natural advantages similar to those of Novara. Casale, the ancient capital of Monferrato, defends one of the principal passages of the Po.

But Turin, owing to its favourable position, has become the great emporium of the valley of the Upper Po. Its commerce has grown immensely, since the town no longer enjoys the perilous honour of being the capital of a kingdom, and the places vacated by the court and Government officials have been filled up quickly by immigrants carried thither by the railways. Its libraries, a fine museum, and various learned societies entitle it to rank as one of the intellectual centres of the peninsula, whilst its manufactures of silks and woollens, of paper and other articles, are of great importance. The environs of Turin are delightful. From the hill of the Superga, a few miles to the east of the city, and crowned by a sumptuous church, may be enjoyed one of the finest panoramas of the Italian Alps. The numerous small towns in its vicinity, such as Moncalieri, Chieri, and Carignano, abound in villas and participate in the prosperity of the capital. As to the towns in the valley of the Tanaro, in the south, they form a group apart, and are the natural intermediaries between the valley of the Po and the port of Genoa. Alessandria, a strong fortress of hideous regularity, which has superseded the old fortresses of Tortona and Novi, is the terminus of eight railways, and one of the busiest places of Italy. The neighbouring cities of Asti, famous for its sparkling wines, and Acqui, celebrated from the time of the Romans for its hot springs, are likewise important for their commerce.*

Milan, the capital of Lombardy, is in every respect one of the leading cities of Italy. In population it is inferior to Naples, in commerce it is outstripped only

* Population of the principal towns of Piemont (1871): Turin, 192,442; Alessandria, 29,102; Novara, 24,185; Vercelli, 20,826; Casale Monferrato, 20,456; Asti, 19,496; Novi Ligure, 12,162; Mondovi, 11,958; Cuneo, 11,859; Pinerolo, 11,852; Biella, 11,814; Saluzzo, 9,796; Savigliano, 9,544; Ivrea, 9,196; Alba, 9,147; Chieri, 8,986; Tortona, 8,620; Acqui, 8,592; Fossano, 7,272; Carmagnola, 3,830.

by Genoa, but in industry it is the equal of both. Its scientific and literary life entitles it, probably, to the first rank amongst the cities between the Alps and Sicily. In the most remote times Milan was an important town of the Celts, and since then the advantages of its position have given it the preponderance amongst all other cities of Northern Italy. Its power during the Middle Ages gained it the epithet of the "Second Rome." At the close of the thirteenth century it had 200,000 inhabitants, whilst London had not then a sixth of that number. Milan stood in want of water, for it was dependent upon the feeble stream of the Olona, and its citizens created the Naviglio Grande and the Martesana, veritable rivers, which furnish a quantity of water double that of the Seine at Paris during summer. They likewise erected magnificent monuments, but most of these have perished during innumerable wars, and the aspect of Milan is now that of a modern town of Western Europe. Its most famous building, the "Duomo," with its prodigious crowd of statues, its finely chiselled marbles and granites, must be looked upon as a marvel of architecture, though from an artistic point of view it is hardly more than an elaborately carved trinket out of all proportion. The stones for this edifice were quarried on the Lago Maggiore, near the mouth of the Toce.

The capital of Lombardy, proud of the past and confident of the future, boasts of never yielding servilely to impulses given from beyond. It has its own opinions, manners, and fashions, and anything accepted from abroad is moulded in accordance with local traditions. The other towns of Lombardy likewise maintain their local character, are proud of their traditions, and glory in the annals of the past. Como, on the beautiful lake named after it, the ancient rival of Milan, gains wealth by spinning silk and exporting the agricultural produce of the Brianza. Monza, surrounded by parks and villas, is the coronation city. Pavia, with its 525 towers, now in ruins, remembers the time when it was the residence of the Lombard kings, and proudly points to the university, one of the oldest in Europe, and to the Certosa (Chartreuse), one of the most sumptuous monasteries of Italy. Vigevano, on the other side of the Ticino, rejoices in a fine castle. Lodi, in the eleventh century, was the most powerful city of Italy next to Milan, and carried on a war of extermination with the latter; it is still a busy place. Cremona, an old republic, boasts of its *torrazzo*, or tower, 393 feet in height, the loftiest in Europe until Gothic cathedrals were built. Bergamo, on a hill commanding the rich plains of the Brembo and Serio, produced a larger number of great men than any other town except Florence; and Brescia, the armourers' town, more haughty still, proclaims herself to be the mother of heroes.

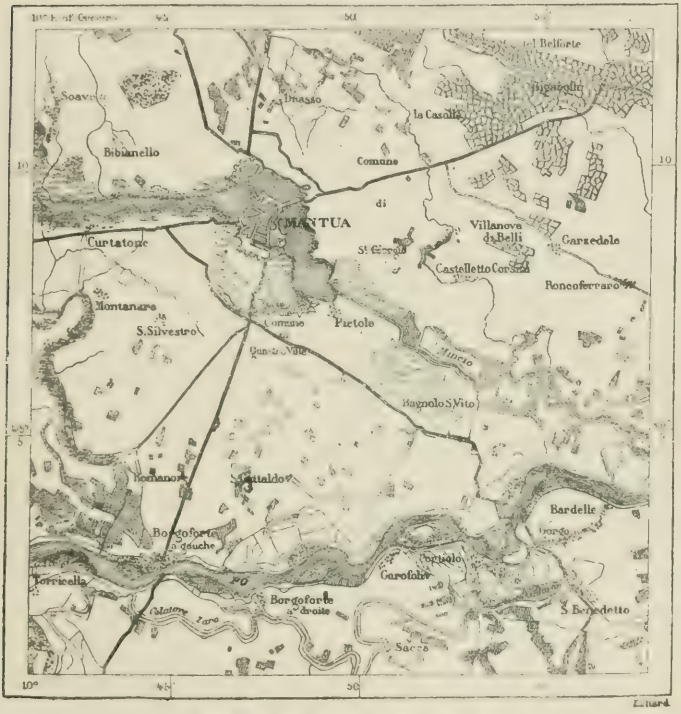
Mantua, on the Mincio, is one of the fortresses of the Quadrilateral, and can hardly be said to belong to Lombardy, though included within its political boundaries. It is essentially a military town. It has lost much of its old commerce, though Jews are more plentiful there than in any other inland city of Italy. Its swamps, woods, rice-fields, ditches, and fortified canals are productive of a degree of humidity exceptional even in Lombardy, and the inhabitants consequently eschew this ancient birthplace of Virgil. Strikingly different is the character of the towns situated in the heart of the mountains, such as Sondrio, the capital of the

Val Tellina, or delightful Salo, on the Lake of Garda, with its group of villas scattered amongst groves of orange-trees.*

The physiognomy of the large towns of Emilia, beyond the Po, offers far fewer peculiarities, for, as most of them are situated along the great Emilian highway, they have been exposed for ages to the levelling influences of travelling merchants and soldiers. Piacenza, a sorry place as a fortress, carries on an important com-

Fig. 76.—The Lakes and Canals of Mantua.

From the Austrian Staff Map. Scale 1 : 198,000.



merce. Parma, an old ducal residence, has a rich library, a museum, and wonderful frescoes by Correggio in its churches. Reggio, another important

* Population of the towns of Lombardy (1871):—Milan (Milano), 261,985; Brescia, 38,906; Bergamo, 34,555; Cremona, 30,919; Pavia, 29,618; Mantua (Mantova), 26,687; Como, 24,350; Lodi, 19,088; Monza, 17,131; Vigevano, 14,056; Busto Arsizio, 12,909; Varese, 12,605; Voghera, 11,903; Treviglio, 11,883.

station on the Emilian highway, is famous as the birthplace of Ariosto. Modena has its museum, and the precious collection of books and manuscripts known as the *Biblioteca Estense*. Bologna the "Learned," which has taken the word "Libertas" for its motto, still remains one of the most interesting of Italian cities. There are its Etruscan cemetery, its palaces and mediæval buildings, and its two leaning towers, which will most certainly come down in the end. Bologna is one of the great railway centres, carries on much commerce, and increases rapidly in population. It would have made a far better capital than Rome. Of late years the environs of the city have been frequently flooded by the Reno, and these disasters have cost Bologna its ancient epithet of "the Fat."

Near this bustling place there are others, now stagnant, which can point only to buildings in proof that they, too, were once flourishing. Ferrara, the ancient capital of the Estes, has fallen from its high estate since the Po has deserted it, but still remains a place of some importance. Ravenna has not been deserted by the Po, but by the sea, with which it communicates now by a canal seven miles in length, and navigable for ships drawing thirteen feet of water. The town became the capital of Honorius and Theoderic the Goth, on account of the protection offered by the surrounding marshes. To the exarchs it is indebted for its curious Byzantine edifices, so rich in mosaics. As to the ancient Etruscan city of Adria, on Venetian soil, to the north of the Po, it could hardly have claimed at any period during the last two thousand years to give a name to the neighbouring sea. It lies now at a distance of fourteen miles from it, and even in the time of the Romans it must have been surrounded by lagoons or swamps, for how else can we explain its epithet of "Town of the Seven Seas?" Porto, at the foot of the Euganean Hills, may owe its name to an ancient lake or river.

Towns famous on account of their history, and still populous, are most crowded together in the southern angle of the plain, usually known as the Romagna. The towers and crenellated walls of Imola rise there on the banks of the Santerno. Lugo, the "town of the beautiful Romagnese," occupies the centre of the district of Ravenna, and has much trade. Faenza, on the Emilian Road, is a large village rather than a town, though it has given its name to a particular kind of porcelain (faience). Forli is, next to Bologna, the most populous city of Romagna. Cesena is known for the excellence of the hemp grown in the neighbourhood. Rimini, where the Emilian Road reaches the sea, still has a few Roman ruins, including a triumphal arch. The inhabitants of the Romagna are distinguished by great energy. Their passions are violent, and as frequently lead them into crime as to deeds of heroism.*

In Venetia there are several provincial towns of importance. Padua abounds in monuments of art, possesses a university, and was formerly the rival of Venice. Vicenza is embellished by the palaces erected by Palladio. Treviso and Belluno are towns of some importance, the one on the Sile, the other in the upper valley

* Population of the principal towns of Emilia (1871):—Bologna, 89,104; Parma, 44,915; Piacenza, 34,908; Ferrara, 33,327; Modena, 30,854; Faenza, 23,752; Ravenna, 21,774; Reggio, 19,131; Imola, 18,189; Cesena, 17,594; Forli, 15,324; Rimini, 9,747; Lugo, 8,664; Comacchio, 7,007.

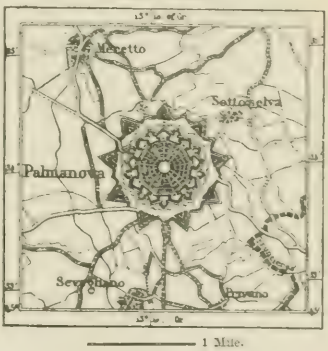
THE PALACE AT FERRARA.

VERONA.

of the Piave. At Udine is pointed out a mound of earth said to have been thrown up by Attila, from which he contemplated the conflagration of Aquileja. Palmanova, on the Austrian frontier, is a regularly built fortress. Verona, at the other extremity of Venetia, has played an important part in the history of Italy, but its commerce and industry have fallen into decay. It hardly fills up the space enclosed by walls and bastions, and its present population is quite out of proportion to the multitude of its public buildings dating from the Middle Ages, and the dimensions of its Roman amphitheatre, capable of seating 50,000 spectators. Amongst all the cities of Venetia it is Venice itself, the "Queen of the Adriatic," which has suffered least in the course of ages.

Venice is a very ancient city. The remains of Roman buildings discovered on the island of San Giorgio, far below the present level of the sea, and therefore referred to in proof of the slow subsidence of the Venetian coast, prove to us that the mud islands of the gulf supported a population long before the invasion of the Barbarians. These half-drowned lands may have attracted the coast population at an early age, for they afforded security against attack, and offered great advantages for carrying on commerce. Nevertheless, the Venice of our time only dates from the commencement of the ninth century, when the government of this maritime republic was established upon the islands separated from the sea by the *lidi*, and from the mainland by estuaries and swamps. This unique position rendered Venice almost impregnable; and whilst the rest of Europe was being desolated by war, Venice sent forth its commercial and warlike expeditions to every part of the Mediterranean, established factories, and built fortresses. Not without arduous struggles, it became the most powerful and wealthiest of the commercial republics of Italy. It was largely indebted for this success to its favourable geographical position, almost in the centre of the mediæval world. Its commerce brought the Venetians into contact with nearly every nation, and they had no prejudices against foreigners. The Armenians were admitted to their city, and an alliance was made even with the Turks. At the time of the Crusades the Venetian Republic occupied the foremost position amongst the states of Europe, and its ambassadors enjoyed a vast amount of influence. This influence was sustained by enormous material forces. Venice had a navy of 300 vessels, manned by 36,000 sailors, and the riches of the world, whether obtained by legitimate commerce or by violence, were accumulated in its 2,000 palaces and 200 churches. Even *one* of the islets upon which the city is built would have purchased a kingdom of Asia or Africa. One of the most sumptuous cities of the West had

Fig. 77.—Palmanova.
Scale 1 : 84,000.



arisen upon banks of mud, inhabited formerly only by poor fishermen. The larch forests of Dalmatia had been cut down, and converted into piles upon which to build palaces. More than 400 bridges of marble joined island to island, and superb embankments of granite defended this marvellous city against the encroachments of the sea. Great achievements in the arts contributed their share in making *Venezia la Bella* a city without its equal.

But geographical discoveries, in which Venice itself took a leading share, undermined the power of the Italian Republic. When Africa had been circumnavigated and the New World discovered, the Mediterranean ceased to be the great commercial sea of the world. Venice was doomed to die. It no longer monopolized the road to India, and the increasing power of the Turks crippled its Eastern trade. Still, so great were its resources, that it maintained its independence for more than three hundred years after it had lost its factories, and only fell when shamefully deserted by General Bonaparte, its supposed ally.

The decadence of Venice was most remarkable during the dominion of Austria. In 1840 the city had less than 100,000 inhabitants, hundreds of its palaces were in ruins, the grass grew in its squares, and seaweeds encumbered its landing-places. Since that time it has been gradually recovering. A bridge of 222 arches and 2,000 feet in length connects it with the mainland, and its commerce, though not equal to that of Trieste, is nevertheless of considerable importance.* The manufacture of looking-glasses, lace, and other articles has imparted fresh life to Venice, and there, as well as in other towns of the lagoons (Malamocco, Burano, Murano, and Chioggia), thousands of workmen are busy in the production of those gay-looking glass beads which find their way into every part of the world, and which in certain countries of the East and in Central Africa take the place of coin. But Venice, though less populous and active than of yore, still rejoices in its delightful climate and its bright skies. Its gaiety and fêtes are not yet things of the past, and its palaces, built in a style half Italian, half Moorish, still contain the priceless masterpieces of Titian, Tintoretto, and Paul Veronese.†

III.—Liguria and the Riviera of Genoa.‡

Liguria is but a narrow slip of land if we compare it with the broad plain of the Po, but it is one of the most clearly defined districts of Europe, and its inhabitants have retained many original traits. The contrast between the Padane plains and the littoral region beyond the barren Apennines is striking, but if we travel in the direction of Provence or of Tuscany the landscape changes only by degrees. The rampart of the Apennines surrounds the whole of the Gulf of

* Tonnage of vessels which entered and cleared (including the coasting trade):—588,095 tons in 1865; 1,070,600 tons in 1875. Value of imports by sea (1874):—£5,960,200; of exports, £2,848,040.

† Population of the principal towns of Venetia (1871):—Venice (Venezia), 128,901; Verona, 65,876; Padua (Padova), 52,011; Vicenza, 26,994; Udine, 22,692; Chioggia, 19,841; Treviso, 18,547; Cavarzere, 12,336; Vittorio (formerly called Ceneda), 10,533; Adria, 9,834; Rovigo, 7,974; Feltre, 6,570; Belluno, 5,770; Este, 5,743.

‡ Area, 2,153 square miles; population (1871), 843,250; density, 391.

Genoa, and there is not a single break in it. These mountains are very different in character from the Alps, though joined to them as the branch of a tree is united to its trunk. It is not possible to tell where one chain ends and the other begins. If the main direction of the mountain is to be the criterion, the Ligurian Apennines may be said to begin at the frontier of France, near the sources of the Tinea and Vesubio; but if great height, pastures, and perennial snow are considered sufficient to constitute an Alpine region, then the Apennines only begin to the east of the Col di Tenda, for the fine summits of the Clapier, Fenêtre, and Gordalesque, to the west of that pass, attain a height of 10,000 feet. They are quite Alpine in their character, and may boast even of small glaciers, the most southerly in the mountains of Central Europe. Geologists usually draw the line where cretaceous and tertiary

Fig. 78.—The Junction of Alps and Apennines.

Scale 1 : 1,500,000.

Erhard

10 Miles.

rocks take the place of the crystalline rocks of the Alps. But this, too, is only a conventional division, for these crystalline rocks, which constitute the crest of the Alps in the west, extend far to the east, and occasionally they break through the sedimentary formations which overlie them, and rise into summits similar to those of the Alps. Thus the granitic summits of the mountains of Spezia remind us of the mountain mass near the Col di Tenda.

The chain of the Ligurian Apennines is by no means of uniform height, but, like that of the Alps, it consists of mountain masses separated by passes. The lowest of these passes is that to the west of Savona, named indifferently after one of the neighbouring villages, Altare, Carcara, or Cadibona. This pass is hardly more than 1,600 feet in height, and is popularly looked upon as constituting the boundary between the Alps and Apennines. The possession of this pass during war has

always been considered of great importance, for it commands the approaches to Genoa and the upper valleys of Piemont, and the Tanaro and Bormido, which rise near it, have often run with blood.

The Apennines to the east of this pass have an average height of 3,300 feet, and beyond the Pass of Giovi (1,538 feet), through which the road leads from Genoa to the northern plains, many summits attain a height of 4,500 feet. Several spurs, abounding in ravines, extend here to the north. The main chain, at the same time, retires from the coast, and the Pass of Pontremoli, which separates the Ligurian from the Tuscan Apennines, and through which leads the road from Parma to Spezia, is no less than thirty miles from the sea. In this eastern portion of the Genoese Apennines a spur detaches itself from the main chain, and terminates in the fine promontory of Porto Venere, a magnificent rock of black marble, surmounted formerly by a temple of Venus. This spur, which protects the Gulf of Spezia against westerly winds, has at all times constituted an obstacle to the intercourse between neighbouring peoples, not so much on account of its height, but because of its steepness. In some places the crest of the Apennines is hardly more than four miles from the sea. The slope, in such places, is exceedingly steep, and roads can ascend it only in numerous windings.*

The small width of the maritime slope of the Ligurian Apennines accounts for the absence of perennial rivers. The most considerable streams to the east of the Roya, which runs for the greater part through French territory, such as the Taggia or the Centa, only assume the appearance of rivers when the snows melt, or after heavy rains. Ordinarily they are but small streams, closed at the mouth by bars of pebbles. Between Albenga and Spezia, for a distance of 160 miles, there are only torrents, and in order to meet again with a real river we must go beyond the Gulf of Spezia. This river is the Magra, which separates Liguria from Etruria, and which, up to the epoch of Augustus, formed the boundary of Italy. Its alluvium has converted an ancient bay of the sea into a lake, and formed a beach, 1,300 yards in width, in front of the ancient Tyrrhenian city of Luni, which formerly stood on the seashore.

The want of great rivers in Liguria is compensated for to some extent by subterranean water-courses. Several springs rise from the bottom of the sea, at some distance from the shore. The springs of La Polla, in the Gulf of Spezia, are amongst the most bountiful amongst them. They have been isolated by the Italian Government from the surrounding salt water, and their water is supplied to ships.

Owing to the absence of rivers, the sterility of the soil, and the steep escarpments, this portion of the Mediterranean coast region contrasts strikingly with other parts of temperate Europe. Having reached the summit of the mountains beyond the magnificent chestnut forests at the head-streams of the Ellero, the Tanaro, and the Bormida, we look down upon a scene almost African in its character. Scarcely a blade of grass is to be seen between Nice and Spezia, and only the grass-plots, kept up at great expense in some pleasure-gardens, remind us that Piemont and Lom-

* Principal altitudes in Liguria:—Clapier de Pagarin, 10,073 feet; Col di Tenda, 6,146 feet; Monte Carsino, 8,794 feet; Col d'Altare, 1,600 feet; Col di Giovi, 1,538 feet; Monte Penna, 5,709 feet.

bardy are near at hand. Pines and brambles would have remained the only verdure in these Ligurian valleys and ravines if it were not for the transformation wrought by gardeners and agriculturists. Strange to say, trees do not ascend to the same height on the slopes of the Apennines as in the Alps, though the mean temperature is far higher, and at an altitude at which the beech still attains noble proportions in Switzerland we find it here stunted in growth. Larches are hardly ever seen.

The sea is as sterile as the land. There are neither shallows, islands, nor seaweeds affording shelter to fish. The cliffs descend precipitously into the sea, and the narrow strips of beach, extending from promontory to promontory, consist only of sand without the admixture of a single shell. The Genoese fishermen, therefore, resort to distant coasts, those of the "Ponente," or west, going to Sicily, whilst those of Camogli, on the Riviera di Levante, visit the coasts of Tuscany. This sterility of land and sea accounts for the large number of Genoese met with in other parts of the world.

But though an unfruitful country, Liguria is exceedingly picturesque. A traveller availing himself of the railway between Nice and Genoa, which follows the sinuosities of the coast and pierces the promontories in numerous tunnels, is brought within reach of the most varied scenery. At one time the line runs close to the beach, with the foam of the sea almost touching the track on the one side, while tamarisks bearing pink blossoms overshadow it from the other. Elsewhere we creep up the steep slope, and obtain a view of the cultivated terraces raised at immense labour by the peasantry, whilst the bluish sea is seen afar to the right, almost hidden by a grove of olive-trees, and stretching away until lost in the direction of Corsica. Towns, villages, old towers, villas, ship-yards, and other industrial establishments impart an almost infinite variety to the scenery. One town occupies the top of a hill, and, seen from below, its old walls and towers stand out boldly against the sky; another is built amphitheatrically, close to the strand upon which the fishermen have drawn their boats; a third is hidden in a hollow, and surrounded by vines, olive, orange, and lemon trees. A date-tree here and there imparts an oriental aspect to the landscape. Bordighera, a small place close to the French frontier, is quite surrounded by palm-trees, whose fruit, however, but rarely ripens.

The climate of Albenga, Loana, and some other places on the Genoese coast is far from salubrious, on account of the miasmata exhaled by sheets of stagnant water left behind by freshets. Even Genoa cannot boast of an agreeable climate, not because there are marshes near it, but because the southerly winds charged with moisture are caught there by the semicircle of mountains, and are made to discharge their superabundant humidity. The number of rainy days at Genoa averages 121 a year. There are, however, several towns along this coast protected by the mountains against the north, and yet out of the usual track of the moisture-laden southerly winds, whose climate is exceptionally delightful.* Bordighera

* Average temperature of Genoa, 60·8° F., days with rain, 121, rainfall, 45 inches. Average temperature at San Remo, 62·6°, days with rain 45, rainfall, 24·17 in.

and San Remo, near the French frontier, are the rivals of Mentone as regards climate; and Nervi, to the east of Genoa, is likewise a favourite place of resort, on account of its clear sky and pure atmosphere. Villas and castles rise on every promontory and in every valley of these favoured districts. For a dozen miles on either side of Genoa the coast is lined by villas. The population of the city has overflowed the walls which once confined it, and is establishing itself in populous suburbs. The long street which winds between factories and gardens, scales promontories, and descends into valleys, will continue to grow in length until it extends along the whole coast of Liguria, for the charms of the country attract men of leisure from every quarter of Europe.

Fig. 79.—Genoa and its Suburbs.

From the Sardinian Staff Map. Scale 1 : 100,000.

2 Miles.

The historical development of the ancient Ligurians, who were probably of Iberian race, was largely influenced by the nature of the country they inhabited. The cultivable land being only of small extent, the superabundant population was forced to look to the sea for a livelihood, and engaged in navigation and commerce. Antium, the modern Genoa, was an "emporium" of the Ligurians ever since the time of the Romans, and its vessels frequented every corner of the Tyrrhenian Sea. In the Middle Ages the Genoese flag was carried into every part of the known world, and it was Genoa that gave birth to Christopher Columbus, whose name is inscribed upon the first page of modern history as the discoverer of America. It was a Genoese, too, Giovanni Gabotto, or Cabot, who afresh discovered the coast of North America five centuries after its original discovery by the

Northmen. The hardy mariners of Genoa have thus navigated the seas from the most remote times. Even now they almost monopolize the navigation of the great rivers of the Argentine Republic. The Genoese likewise enjoy a high reputation as gardeners, and are met with in every large town of the Mediterranean.

As long as the Apennines were not crossed by practicable carriage roads, Genoa possessed no advantages whatever over the other ports of Liguria, but ever since it has been placed in easy communication with the fertile plains of Lombardy and Piemont, the great advantages of its geographical position have

Fig. 80.—View of Genoa.

told upon its development. Pisa was the only republic on the western coast of Italy which contested this superiority of Genoa, but was defeated after a sanguinary struggle. The Genoese possessed themselves of Corsica, the inhabitants of which were treated most cruelly; they took Minorca from the Moors, and even captured several towns in Spain, which they restored only after important commercial privileges had been granted them. In the Ægean Sea the nobles of Genoa became the proprietors of Chios, Lesbos, Lemnos, and other islands. At Constantinople the Genoese merchants were as powerful almost as the Emperor. Kaffa, in

the Crimea, was one of their wealthy colonies. Their factories and towers were met along every commercial high-road in Asia Minor, and even in the recesses of the Caucasus. The possession of the Black Sea gave them the command of the trade with Central Asia. These distant colonies explain the use of a few Arab, Turkish, and Greek terms by the Genoese, and though the dialect spoken by them is decidedly Italian, the intonation is French.

Nevertheless Genoa, though more powerful than Pisa, failed in wresting the command of the sea from the Venetians, who enjoyed immense advantages through their connection with Germany. Her political influence has never equalled that of Venice, nor has she produced as many men eminent in literature and art as has her Adriatic rival. The Genoese had the reputation in former times of being violent and false, fond of luxury and power, and indifferent to everything which did not enrich them. "A sea without fish, mountains without forests, men without faith, women without modesty—thus is Genoa," was a proverb ever in the mouth of the enemies of the Ligurian city. The dissensions amongst the noble families of Genoa were incessant, but the Bank of St. George never allowed civil strife to interfere with business. Wealth flowed into the city without any cessation, and enabled its citizens to construct those palaces, marble arcades, and hanging gardens which have won for it the epithet of *la Superba*. In the end, however, ruin overtook the Bank, and that justly, for it had supplied princes with money to enable them to wage war, and its bankruptcy in the middle of the eighteenth century rendered Genoa politically impotent.

The capital of Liguria, in spite of its small extent, its sinuous streets, its ramparts, stairs, and dirty narrow quays, may justly boast of palaces equally remarkable for the splendour and originality of their architecture. Many of these magnificent buildings appeared to be doomed to ruin during the decay of the town, but, on the return of more prosperous times, the citizens again devoted themselves to the embellishment of their city. Genoa is the busiest port of Italy.* Its shipowners possess nearly half the Italian mercantile marine, and three-fourths of the vessels annually built in Italy are furnished from its ship-yards. The harbour, though 320 acres in extent, no longer suffices for the hundreds of sailing vessels and steamers which crowd into it. Nor is it sufficiently sheltered against the winds, and it has therefore been proposed to construct a vast breakwater far beyond its present limits. Genoa fancies that its interests are not sufficiently attended to by the Central Government. A second railway across the Apennines is urgently demanded, in order to manage the traffic that will be created by the opening of the direct railway through Switzerland, which will place Genoa in direct communication with Western Germany.

In the meantime Genoa is expanding in all directions. Its factories of macaroni, paper, silks and velvets, soap, oil, jewellery, metal-work, pottery, ornamental flowers, and other objects are ever increasing; and *orrar del Genoes*—Genoese

* Tonnage of vessels which entered and cleared (including coasting vessels):—1861, 1,936,764; 1867, 2,330,000; 1875, 3,109,796 tons. In the last-named year 3,144 sailing vessels and 970 steamers entered in the coast trade, 1,462 sailing vessels and 860 steamers from abroad.

industry—is a marvel now, as it was in the Middle Ages. San Pier d'Arena (Sampierdarena), to the west, has become a veritable manufacturing town. Corni-

Fig. 81.—The Gulf of Spezia.

From the Sardinian Staff Map. Scale 1 : 50000.

gliano, Rivarolo, Sestri di Ponente with its large ship-yards, Pegli, and Voltri are populous towns, having spinning-mills and foundries. Savona, whose port was

filled up by the jealous Genoese, occupies the bottom of a vast bay. It has glass-works and potteries, and is connected by a railway with Turin. Elsewhere on the Riviera di Ponente the towns are crowded closely together. Such is the case with the twin cities of Oneglia and Porto Maurizio, the one built on the beach, the other on a steep hill close by, and known as the "Fountains of Oil," because of their extensive plantations of olives. At San Remo, however, olives are more plentiful still.*

On the Riviera di Levante town joins town like pearls in a necklace. Albaro, with its charming mansion, Quarto, whence departed the expedition which took Sicily from the Bourbons, and Nervi, a health resort for persons suffering from pulmonary diseases, constitute a long-stretching suburb of Genoa, extending in the direction of Recco and Camogli, two towns abounding in shipping. The rocky promontory of Porto Fino, thus named after the dolphins which formerly frequented it, imposes an insurmountable obstacle to the further extension of Genoa in this direction. Having traversed the tunnel leading through this promontory, we reach another group of towns, viz. Rapallo, the industrious; Chiavari, a great place of trade; Lavagna, with its famous quarries of grey slates; and Sestri di Levante, a town of fishermen.

The coast beyond Sestri is but sparsely inhabited, for there bold cliffs approach the sea; but having doubled the superb cape of Porto Venere, we enter the fine Gulf of Spezia,† with its numerous forts, ship-yards, arsenals, and other buildings. The Italian Government has been busy ever since 1861 in converting this gulf into a first-rate naval arsenal, but no sooner has a portion of the work been completed than the progress made in the arts of destruction compels the engineers to remodel it — a very costly task. Whatever future may be in store for Spezia as a military port, it has none as a commercial one, for though it affords excellent shelter to vessels, no railway connects it with the fertile countries beyond the Apennines, and its exports are limited to the produce of the valleys in its immediate vicinity. Spezia is indebted for its high rank amongst the cities of Italy to its beautiful gulf, the rival of the Bay of Naples and the roadstead of Palermo. From the summit of the marble hill above the decayed town of Porto Venere we look down upon a marvellous succession of bays and promontories, and far in the distance the mountains of Corsica rise indistinctly above the blue waters. Looking to the east, we behold the picturesque towns on the opposite side of the gulf embedded in groves of olive-trees and cypresses, the Apuanic Alps and the Apennines bounding the horizon. Right opposite is the charming town of Lerici, and to the south of it the shore upon which Byron reduced to ashes the body of his friend Shelley: no spot more appropriate for this mournful holocaust.

* Annual produce of olive oil in the province of Porto Maurizio, which includes San Remo, 778,500 gallons.

† Population of the principal towns of Liguria (1871):—Genoa (Genova), 132,521; Savona, 24,851, Spezia, 15,636; San Pier d'Arena, 15,568; Sestri Ponente, 9,605; San Remo, 9,017; Chiavari, 8,414; Oneglia, 7,944.

IV.—Tuscany.

Tuscany, like Liguria, lies on the southern slope of the Apennines, but is of far greater width, for that back-bone of Italy retreats there from the Gulf of Genoa, and stretches right across the broadest part of the peninsula to the Adriatic. Besides this there are several detached plateaux and mountain ranges to the south of the valley of the Arno.*

The Apennines of Tuscany are of very unequal height, and they are traversed by numerous low passes, which could easily be converted into carriage roads. Speaking generally, they consist of a series of elongated and parallel mountain masses, separated from each other by valleys, through which flow the head-streams of the Serchio and the Arno. The first important mountain mass of the main chain near the frontiers of Liguria, which is commanded by the Orsajo and Succiso, is thus separated by the valley of the Magra from the parallel range of Lumigiana. The chain of Garfagnana, to the north of the plains of Lucca, has for its pendant the Alps of Apuana. Monte Cimone, farther east, and the other summits of the *Alpi Apennine* to the north of Pistoja and Prato, are attended by the parallel ridges of the Monti Catini and Monte Albano, on whose slope is the famous grotto of Monsummano, with a thermal spring. A fourth mountain mass, that which the direct road from Florence to Bologna crosses in the Pass of Futa, has likewise its lateral chains, viz. the Monte Mugello, to the south of the Sieve: the Prato Magno, encircled by the Upper Arno; and the Alps of Catenaja, between the Arno and the Tiber.†

The Apennines of Tuscany in many places attain a height of 5,000 feet, and are quite Alpine in their aspect, the upper slopes remaining covered with snow for more than half the year. They owe much of their grandeur to the precipitous slopes and fantastic profiles of the calcareous rocks which enter so largely into their composition. The forests of chestnuts, firs, and beeches which formerly clothed the whole of the range have not yet been entirely destroyed. The beautiful woods which cover the slopes of Prato Magno have impressed the mind of many a poet; and, since Milton sang the delights of Vallombrosa, the "shaded vale" has become a proverbial name for everything sweet and touching in the poetry of nature. Farther to the west the monastery of the Campo di Maldulo (Camaldoli) occupies one of the most beauteous spots in all Italy, the woods and meadows of which have been celebrated by Ariosto. From the summit above the convent both the "Tuscan and the Slavonian Sea" can be seen, as that poet tells us.

The barren escarpments and forests of the Apennines form a charming contrast to the valleys and rounded hills of Lower Tuscany, where nearly every height is

* Area of Tuscany, 9,287 square miles; population (1871), 1,856,810; density, 214.

† Altitudes (in English feet):—

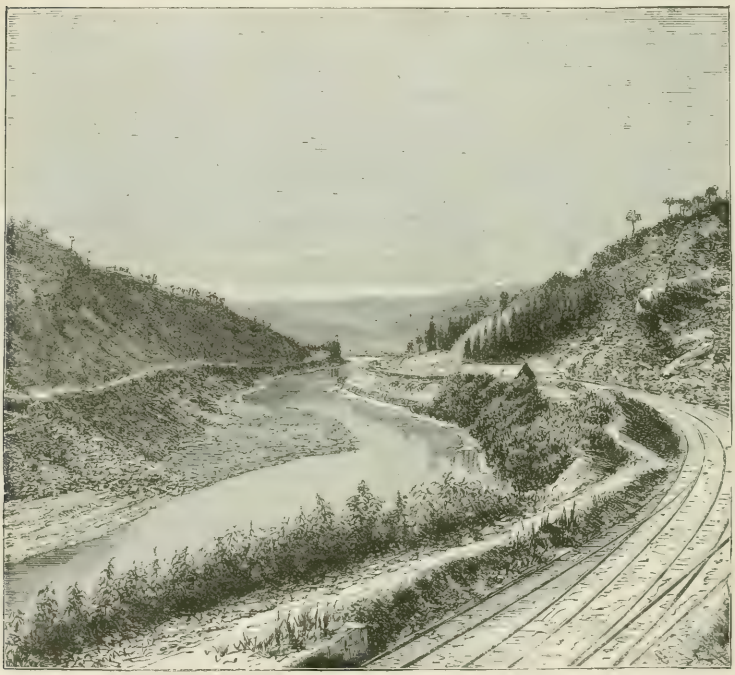
Apennines.—Alpe di Succiso, 6,035; Alps of Camporaghena (Garfagnana), 6,545; Monte Cimone, 7,111; Monte Falterona, or Falterona, 5,407.

Passes.—Pass of Pontremoli, or La Cisa (Sarzana to Parma), 3,410; Pass of Fiumalbo (Lucca to Modena), 3,440; Pass of Futa, or Pietramala (Florence to Bologna), 3,002; Pass of Camaldoli, 3,200.

Apuan Alps.—Pisanino (Alpe Apuana), 6,093; Pietra Marina (Monte Albano), 1,886; Prato Magno, 5,188; Alpe di Catenaja, 4,595 feet.

surmounted by the ruins of a mediæval castle ; graceful villas are scattered over the verdant slopes, farmhouses stand in the midst of vineyards and pointed cypresses, and every cultivable spot is made to yield a rich harvest. Historical associations, the taste of its inhabitants, the fertility of the soil, an abundance of running water, and the sweetness of the climate all combine in making Central Tuscany one of the most privileged regions of Italy. Protected by the rampart of the Apennines against cold northerly winds, this region faces the Tyrrhenian Sea, whence blow warm and humid winds of tropical origin. The rains they bring are not

Fig. 82.—The Golfolino of the Arno, near Signa.



excessive, thanks to the screen formed by the mountains of Corsica and Sardinia, and the happy disposition of the detached hills near the coast. The climate of Tuscany is essentially temperate, and to its equability, no less than to the natural beauty of their abode, the Tuscans owe, no doubt, much of their gaiety, their good-nature, fine taste, poetical feeling, and facile imagination.

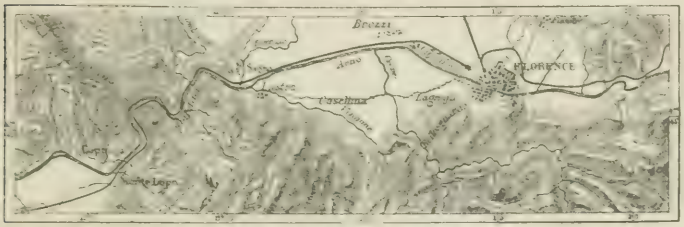
The valley of the Arno completely separates the hills of Southern Tuscany, usually known as the "Sub-Apennines," from the principal chain of the mountains. This valley, with its defiles and ancient lake basins, may be likened to a moat

bounding the wall of the Apennines. The vale of Chiana, originally an arm of the sea, and then a lake, forms the uppermost portion of the zone which separates the Apennines from the hills of Southern Tuscany. Then follows the Campagna of Florence, an ancient lake basin, which it would be easy to flood again by building a dam across the defile of the Golfolino, through which the river makes its escape, and which was rent asunder by the "Egyptian Hercules." Castruccio, the famous commander of the Luccans, actually proposed to flood the plains of Florence in the fourteenth century by constructing a dam across this defile; but happily his engineers pronounced the scheme to be impracticable, for they supposed the difference of level to amount to 288 feet, whilst in reality it is only fifty.

The Sub-Apennine hills to the south of the Arno are of rounded contours, of a gloomy grey colour, and devoid of all verdure. Whilst the Apennines consist exclusively of Jurassic and cretaceous rocks, the Sub-Apennines are of tertiary formation, their sandstones, clays, marls, and pudding-stones being pierced here and there by serpentine. Well-defined ranges can hardly be said to exist. Southern Tuscany,

Fig. 83.—Defiles of the Arno.

From the Austrian Staff Map. Scale 1 : 280,000.



5 Miles.

indeed, may be described as a table-land intersected by rivers in all directions, surmounted by irregular groups of hills, and pierced by "sinks," which swallow up some of the rivers. The cavities of the Ingolla form one of these sinks, in which several rivulets lose themselves, to reappear lower down as the source of the Elsa Viva, one of the principal tributaries of the Arno. The most elevated hills of this Sub-Apennine region form the water-parting between the Arno, the Cecina, and the Ombrone, and in the Poggio di Montieri, a mountain abounding in copper, they attain an elevation of 3,323 feet. The Labbro (3,815 feet), Cetona (3,650 feet), and Monte Amiata (5,450 feet), to the south of the Ombrone valley, rise to a greater height, but geologically they belong already to Central Italy. The Cetona is a Jurassic outlier surrounded by recent formations. Monte Amiata, a trachytic cone, is the most elevated volcano of continental Italy. It no longer vomits lava, but numerous hot springs and solfataras prove that the volcanic forces are not yet quite extinct. The Radicofani (2,950 feet) is likewise an extinct volcano, whose lava resembles petrified froth, and can be cut with a hatchet.

Subterranean agencies must indeed be very active in Tuscany, for metalliferous

veins ramify in all directions, and the number of mineral springs of every description is larger than in any other part of Italy. Amongst these springs there are several of world-wide reputation, as, for instance, those of Monte Catini, of San Giuliano, and of the Bagni di Lucca. The brine springs of Tuscany are very productive; but the most curious, and at the same time most useful, springs of all are the famous *lagoni*, in a side valley of the Cecina, and at the northern foot of the Poggio di Montieri. From a distance dense clouds of white vapour are seen rolling over the plain, and the bubbling noise made by gases escaping through the ponds, or *lagoni*, is heard. These ponds contain various salts, silica, and boracic acid, which is of great value in the manufacture of china and glass, and yields a considerable revenue to Tuscany. Nowhere else in Europe, except, perhaps, in the crater of the Eolian Vulcano, is boracic acid met with in sufficient quantities to repay the labour of extracting it. In Tuscany, however, there are several other localities where it might be won with advantage, as, for instance, near Massa Maritima, to the south of the Montieri.

The subterranean fermentation of which Tuscany is the scene is no doubt due in a large measure to the changes which have taken place in the relative proportions of land and sea. Several isolated hills rise near the coast like islands from the sea, and these have evidently been joined to the mainland by the alluvial deposits brought down by the rivers. The Monti Serra (3,000 feet), to the east of Pisa, between the Arno and the Serchio, are almost insulated even now, for they are surrounded by swamps, and the level of the Lake of Bientina, at their eastern foot, is scarcely thirty feet above that of the Mediterranean. The heights along the coast to the south of Leghorn are not quite so isolated, but the lowland which connects them with the table-land of the interior is only of small elevation. The promontory, however, whose extremities are occupied by the towns of Populonia and Piombino (653 feet), is joined to the mainland only by a low plain of sand. The most perfect type of these ancient islands is presented to us in the superb Monte Argentaro, at the southern extremity of the Tuscan littoral, which rises boldly from the sea to a height of 2,085 feet, and is attached to the mainland by two narrow strips of land covered with pine-trees, enclosing a lake of regular shape: in the midst of it, on a fragment of the ancient beach, is built the town of Orbetello. This lake, which looks almost as if it were the work of a generation of giants, has been converted into an eel-pond, and millions of fish are caught in it every year. Towards the west of this mountain, in the direction of Corsica, lie the islands of Giglio and Monte Cristo (2,062 feet) and the rock of Formica. The island of Elba, farther north, forms a small world of its own.

The rivers of Tuscany have wrought great changes in the plains through which they flow, and along the sea-coast. Their labour has been facilitated by the nature of the soil which they traverse. The least rain converts the barren hill-slopes into a semi-fluid paste, which is carried by the rivers down to the sea. The mouth of the Arno has thus been pushed forward to the extent of seven miles in the course of a few centuries. In former times the Serchio and the Arno united before they flowed into the sea, but the Pisans diverted the former river to the

north, in order to rid themselves of its unwelcome deposits. Pisa, in the time of Strabo, stood at a distance of only twenty Olympian stadia from the Tyrrhenian Sea, and when the *cascina* of San Rossore was built, towards the close of the eleventh century, its walls were close to the beach, which is now at a distance of three miles. Extensive plains intersected by dunes, or *tomboli*, and partly covered with forests of pines, have been added to the land in the course of centuries. These sandy wastes have become the home of large herds of horses and half-wild cattle, and the camel has been acclimatised there, it is said, since the Crusades. These

Fig. 84.—Monte Argentaro.
From the French Chart. Scale 1 : 168,000.

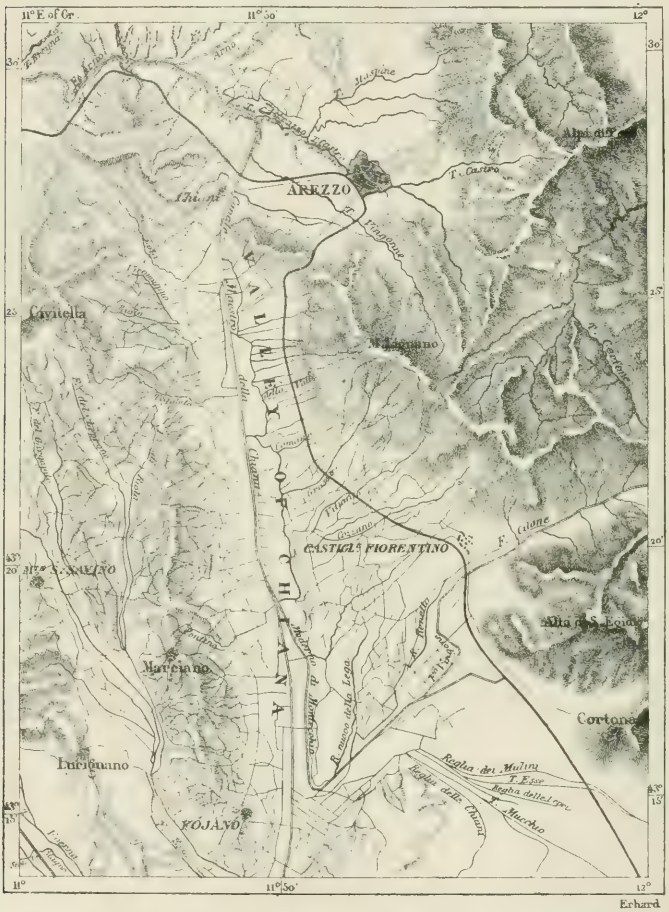
changes in the coast-line may not, however, be due exclusively to the agency of the rivers, for there exists evidence of an upheaval of the land. The building stone known at Leghorn as *panchina* is clearly of marine origin, and the shells which enter into its composition are still met with in the Tyrrhenian Sea.

Amongst the changes effected by human agency in the basin of the Arno those referring to the Val di Chiana are, perhaps, the most important. This depression connects the basins of the Arno and Tiber, and may possibly have served as an outlet to the former river before it had opened itself a way through the

gorge below Florence. Formerly the water-parting between the two rivers was close to the Arno. A small portion of its drainage was carried to the Tuscan river, but by far the greater portion of the vale was occupied by stagnant pools,

Fig. 85.—Val di Chiana.

From the Austrian Staff Map. Scale 1 : 213,000.



extending to the south as far as the latitude of Montepulciano, a distance of twenty miles. The whole of this region was a breeding-place of fever. Dante and other Italian writers speak of it as an accursed place. The inhabitants made vain attempts at drainage. The illustrious Galileo, when consulted on the subject,

declared that nothing could be done to mend this evil: and though Torricelli conceived that it would be possible to drain the valley, he took no steps to put his theories into practice.

About the middle of the eighteenth century the work of drainage was at length seriously taken in hand, directed by Fossombroni, the celebrated engineer. "Warps," or *colmate*, were thrown up at the outlet of each lateral ravine between which the débris carried down from the flanks of the mountains was deposited. The swamps gradually filled up, and the soil became firm. By constructing a dam *argine* across the vale at the point chosen for the new water-parting, an outfall was created, and a line of stagnant swamps was thus converted into a pure rivulet. The valley, at one time a hotbed of fever, has now become one of

Fig. 86.—The Lake of Bientina.

From the Austrian Staff Map. Scale 1 : 86,400.

the most salubrious districts of Italy. The newly won lands were at once taken possession of by agriculturists, and 500 square miles were thus added to the productive area of Tuscany. Villages, formerly inhabited by fever-stricken wretches, have become wealthy towns, and the success of this *bonification*, or reclamation, has been thorough. The torrents are under control now, and have already deposited 17,650 million cubic feet of alluvium over an area of 50,000 acres, as if they were intelligent workmen. The same system of drainage has been successfully applied in other parts of Italy, and particularly near Grosseto, on the right bank of the Ombrone.

Amongst the great drainage works which will evermore contribute to the glory of Tuscan engineers, the innumerable canals draining the plains of Fucecchio,

Pontedera, Pisa, Lucca, Leghorn, and Viareggio, each of which was formerly occupied by its lake, deserve to be noticed. One of the most difficult of these lakes is that of Bientina, or Sesto, to the east of the Pisan hills, which is supposed to have been formed by an overflow of the Serchio. In former times this lake had two effluents, one running north to the Serchio, the other south to the Arno. The outfall left nothing to be desired in ordinary times, but after heavy rains the two effluents were converted into inflowing rivers, and if the sluices had not been closed, the Arno and the Serchio would have rejoined each other in this inland sea. The Bientina, during such freshets, covered six times its ordinary area, and in order to save the fertile fields of Tuscany it became absolutely necessary to create a third effluent. The engineers conceived the happy idea of conveying this new effluent through a tunnel, passing beneath the Arno, three feet in width, into an ancient bed of that river, now supplanted by the Colombrone.

In most of these enterprises it was necessary to struggle on in spite of the miasmatic atmosphere, which hung more particularly over the littoral zone, where the fresh inland water mingles with the salt water of the Mediterranean. The blending of the two waters destroyed the fresh-water plants and animals, and the deleterious gases arising from their decomposition poisoned the atmosphere. About the middle of last century an engineer, Zendrini, proposed to construct sluices separating the fresh from the salt water. This was done, and the fevers at once disappeared. In 1768, the sluices having been allowed to fall out of repair, the miasmatic scourge immediately reappeared, and it was not until they had been repaired that the sanitary condition of the villages along the coast was improved. Twice since neglect to keep the sluices in a proper condition has been punished with the same results; but from 1821 they have been maintained in thorough order, and the sanitary condition of the country has ever since been most satisfactory. Viareggio, in the centre of this malarial district, was up to 1740 hardly more than a hamlet, avoided on account of its insalubrity, but is now a seaside town, the favourite resort of numbers of visitors.

Much has been done, no doubt, in draining the land, but there is still room for many improvements. The Maremma, a tract between Piombino and Orbetello, remains one of the most insalubrious regions of Europe, in spite of what has been done by sanitary engineers. The inhabitants never reach a high age, and though they descend to the plain only when it is absolutely required for cultivating their fields, they frequently carry away with them the germs of disease. In the two summers of 1840 and 1841 no less than 36,000 persons suffered from fever amongst a total population of 80,000 souls, most of whom reside in villages built on hills, and only rarely visit the pestilential plain. In order to escape the pernicious influence of the poisonous air, it is necessary to reside constantly at an elevation of 325 feet above the sea, and even that does not always suffice, for the episcopal city of Sovana is notoriously unhealthy, though built at that height. Fevers occur frequently at a distance from the swamps, and Salvagnoli Marchetti is of opinion that they are due to the nature of the soil. The malaria is said to creep up clayey hills permeated by empyreumatic substances; it likewise

poisons the air of districts abounding in saline springs, and still more that near deposits of alum. Southerly winds are likewise most pernicious, and fevers rise highest in the valleys which are exposed to them. Places, on the other hand, which are fully open to the sea breeze are quite free from malaria, even if swamps are near, as at Orbetello and Piombino.

It is generally admitted that the coasts of Etruria did not suffer from malaria whilst the ancient Tyrrhenian cities were prosperous. The excavations made

Fig. 87. The Malarial Regions.
From the Austrian Staff Map. Scale 1 : 2,500,000.

recently in connection with the railways have revealed a complete system of subterranean canals, which formerly drained the whole of the Maremmas. Populonia and other large cities, of which only a few ruins are found now, could certainly not have existed if the climate had been as unhealthy as at present. The ancient Etruscans were famous as hydraulic engineers. They embanked torrents, drained swamps, and rendered the country cultivable, but their engineering works were allowed to decay soon after they had been subjected, and the country returned to its primitive savageness. On the other hand, there are many towns

which were considered healthy during the Middle Ages, but are now desolated by fever. Massa Maritima, to the south-west of the Montieri mountain, was rich and populous as long as it maintained its republican liberties; but no sooner had it been enslaved by Pisans and Sienese than its drainage works were allowed to fall into decay, and in the end it found itself reduced to the "shadow of a town." Sanitary works carried out recently have brought back some of its ancient prosperity.

Amongst the causes which have contributed most materially towards a deterioration of the climate may be mentioned the destruction of the mountain forests and the rapid increase of alluvial lands resulting from it. The monasteries of Tuscany, which until quite recently were the owners of the fish-ponds in the Maremmas, energetically protested against the construction of embankments or other drainage works, which they conceived would interfere with their cherished Lenten food. Several of the inland towns rejoiced in the possession of some unhealthy swampy tract, to which obnoxious persons might be banished with a certainty of their dying. Even the Kings of Spain established a penal establishment at one of the most deadly spots on this coast, and banishment to Talamone, at one time a flourishing port of the Republic of Siena, was tantamount to a sentence of death.

Many attempts were made to reclaim these lands. Macchiavelli and other statesmen of Tuscany thought that the former salubrity of the climate could be restored by merely repeopling the country. Colonists were sent for from other parts of Italy, and even from Greece and Germany, but they soon succumbed to the climate. Since that time considerable progress has been made in rendering these marshy districts more salubrious. Trees have been planted, and, in combination with proper drainage, they have rendered many districts habitable which were not so formerly. Populonia is a case in point. Follonica, where there are furnaces in which the iron ores of Elba are smelted, is likewise looking up, though its inhabitants still fly the place on the approach of the fever season.

The Etruscans, or Tyrrhenians, were the ancestors of the Tuscans, and long before the dominion of the Romans they were the preponderating race of all Italy. They occupied not only the whole of the southern slope of the Apennines as far as the Tiber, but had also founded a confederation of twelve towns in the Campagna, of which Capua was the head, and as traders and pirates they held possession of the Tyrrhenian Sea, still named after them. The island of Capri was one of their most advanced outposts towards the south. The Adriatic was likewise their own, for Adria, Bologna (called Felsina by them), Ravenna, and Mantua were Etruscan colonies, and the Rhætians in the Alpine valleys were their allies, and perhaps kinsmen. But who were the Etruscans? They have been classed with Aryans, Ugrians, and Semites; with Greeks, Germans, Scythians, Egyptians, and Turks. The Etruscan inscriptions on ancient monuments, though very legible, have not hitherto been deciphered satisfactorily. If Corssen's interpretation is accepted, their language resembled the Latin tongues; but this

philologist, after all, may not be entitled to be called the "Œdipus of the Etruscan sphinx."

The most common type of the Etruscans, as transmitted to us on cinerary vases, is that of squat men, often inclining to obesity, with broad shoulders, prominent face, curved nose, broad retreating forehead, dark complexion, dolichocephalous skull, and curly hair. This type is neither Hellenic nor Italian. Amongst their monuments there are none of those curious structures known as *nuraghi*, which abound in Malta, Sardinia, and Pantellaria, but dolmens are numerous. The sepulchral monuments, of which many thousands have already been brought to light, prove that the arts had attained a high degree of development in ancient Etruria. The paintings in the interior of the vaults, the bas-reliefs on the sarcophagi, the vases, candelabra, pottery, and bronzes, resemble similar work produced by the genius of Greek artists. The arrangement of their dwelling-houses, though not devoid of originality, proves the intimate connection existing between the civilisations of the Etruscans and early Greeks. It was the Etruscans who initiated Rome into the arts. The *Cloaca Maxima*, the most ancient monument of the Eternal City, the wall named after Servius Tullius, the Mamertine prison, and, in fact, all the remains of the Rome of the kings, were their work. It was they who erected the temples, supplied the statues to deities, built the dwelling-houses, and furnished them with articles of ornament. Even the she-wolf of bronze, now in the Capitoline Museum, and a symbol of the Roman people, appears to be of Etruscan workmanship.

The Tuscans of our day differ, however, in many respects from their Etruscan ancestors. These latter, to judge from the paintings in their sepulchral cities, were an austere race. They appear, likewise, to have been a nation of cooks and gluttons. Neither of these qualities can be laid to the charge of their descendants. The modern Tuscan is of an amiable and kindly disposition, he is possessed of wit and artistic tastes, easy to move, and altogether perhaps a trifle too pliant of character. The Tuscans of the plain, but not those of the Maremmas, are the most gentle of Italians; they "live and let live," and are exceedingly good-natured. A singular trait distinguishes them from the rest of the Italians: though brave when carried away by passion, they turn with horror from a dead body. In this we may trace the persistence of ancient superstitions, for though the Tyrrhenians concealed their tombs, the worship of the dead was the most prominent of their religious observances.

The modern Tuscans, like their ancestors, have known a time when they took the lead amongst the people of Italy, and even now they stand at the head of the nation in certain respects. After the decadence of Rome, when civilisation gravitated towards the north, the valley of the Arno became one of the great centres of the world's activity. At that time the passage of the Alps was still difficult, but communications by sea were established between Tuscany, France, and Spain. The Apennines not only sheltered the fertile valleys opening upon the Tyrrhenian against cold northerly winds, but also against the hordes of barbarian invaders. Tuscany was, indeed, a favoured region, and its intelligent

inhabitants made the most of the natural advantages they possessed. "Work" was the great law of the Florentines, and all, without exception, were expected to engage in it. Whilst Pisa disputed the dominion of the sea with Genoa and Venice, Florence became the head-quarters of commerce, and its bankers extended their operations to every part of Europe.

But Tuscany was more than a commercial and industrial country. What Athens had been to the world two thousand years ago, republican Florence became during its period of prosperity, and for the second time in the history of mankind there arose one of those centres of light the reflected rays from which still illuminate our own times. Arts, letters, sciences, and political economy—everything, in fact, that is noble in this world was cultivated with an energy to which nations had been strangers for a long time. The pliant genius of the Tuscans revelled in every species of work, and amongst the names great in history Florence may fairly claim some of the greatest. Where are the men that have exercised a greater influence in the world of art and intellect than Giotto, Orgagna, Masaccio, Michael Angelo, Leonardo da Vinci, Andrea del Sarto, Brunelleschi, Savonarola, Galileo, or Macchiavelli? It was a Florentine, too, Amerigo Vespucci, who gave his name to the New World, and justly so, for it was Vespucci through whom the discoveries made by the Spaniards first became known, and who, in 1501, bestowed the name of *Novus Mundus* upon the newly discovered countries, whilst Columbus died in the belief that he had reached the eastern coast of Asia.

The dialect of Florence has become the polished language of the whole of Italy, and it is curious that this honour should not have been carried off by Rome. But whilst Florence cultivated the arts and sciences, and through her great writers exercised an immense influence, the city of the popes yielded herself up to the worship of the past, and its literature was written in a dead language, more or less successfully imitated from that of Cicero. The dialect of Rome never became a language like that of Florence, but Italian is nevertheless indebted to Rome for its musical pronunciation, that of the Tuscans being harsh and guttural. Hence the old proverb, "Lingua Toscana in bocca Romana." The delicate, pure poetry breathed in the *ritornelli* which Tuscan peasants chant in the evening is highly appreciated by all admirers of Italian, and the influence which the fine dialect of the Florentines exercised upon the unification of Italy can hardly be overestimated. The worshippers of Dante are almost justified in saying that Italian unity dates from the day on which the great poet first expressed himself in the firm and sonorous language which he had forged out of the various dialects spoken throughout the peninsula.

The geographical position of Tuscany accounts for the influence it has exercised upon Italy and the rest of the world, whilst its topography gives us the key to the local history of the country. The Apennines and the mountains to the south of the Arno divide it into a number of separate basins, each of which gave birth to a small state or republic. At the time of the Tyrrhenians Etruria formed

a confederation of cities, whilst during the Middle Ages it was divided into numerous small republics, frequently at war with each other. Since that time many changes have taken place in the relative importance of the various towns, but even now most of the free cities of the Middle Ages, and even some founded by the ancient Etruscans, occupy a high rank amongst the provincial towns of Italy.

Florence (Firenze) is not one of these ancient cities of the Tyrrhenians; it is merely a Roman colony of comparatively modern origin. In the time of the Empire it was of small importance, for Fiesole, on a hill to the north, remained the leading town of the country until destroyed by the Florentines, who carried its columns and statues to their own town. The rapid growth of Florence during the Middle Ages is due to its position on the highway which connects Germany, Lombardy, and even Bologna with Southern Italy. As long as Rome was the capital of Italy travellers starting from the valley of the Tiber crossed the Apennines in the direction of Ancona and Ariminum. But after the fall of Rome, when barbarian hordes inundated the country from the north, the high-roads connecting the plains of Lombardy with the valley of the Arno rose into importance. This great military highway became simultaneously a high-road of commerce, and it was only natural that a great emporium should spring up on the site occupied by Florence. The "city of flowers" prospered, and became the marvel which we still admire. But the wealth of the growing commonwealth proved its destruction. The rich bankers grasped at political power, the Medici assumed the title of princes, and though the arts continued to flourish for awhile, public virtues decayed, the citizens became subjects, and intellectual life ceased.

Florence, as in the days of republican liberty, owes much of its wealth to the industry of its inhabitants. There are manufactories of silks and woollen goods, of straw hats, mosaics, china, cut stones (*pierra dura*), and other objects, all of them requiring workmen possessed of taste and manual dexterity. But neither these industries nor the commerce carried on by the town would have raised Florence above the level of other populous Italian cities. The prominent position it holds is due entirely to the beauty of its monuments, which attract to it the lovers of art from every quarter of the world. Not even Venice is equally rich in architectural masterpieces of the Middle Ages and the Renaissance. The museums of Florence "la Bella"—such as the Uffizi and Pitti galleries, and the Academy of Arts—are amongst the richest in Europe, and contain some of the most highly prized treasures of art; its libraries abound in curious manuscripts and rare old books. Nay, the very streets and piazzas of the town, with their palaces, towers, churches, and statues, may be likened to a huge museum. Brunelleschi's Duomo; Giotto's Campanile, which was to "surpass in beauty all imagination can conceive;" the Baptistery, with its incomparable doors of brass; the Piazza della Signoria; the monastery of San Marco, now a museum; the gloomy palace of the Strozzi; and numerous other buildings of superior merit make Florence the delightful place it is. Its charms are enhanced by the beauty of the surrounding

country, and the traveller will always recall with pleasure the walks along the Arno, the hills of San Miniato and Bello Sguardo, and the picturesque spur upon which lie the villas and ruins of Etruscan Fiesole. Unfortunately the climate of Florence leaves much to be desired; the wind changes abruptly, and the heat in summer is overpowering. *Il caldo di Firenze* has become proverbial throughout Italy. Narrow streets, and to some extent the disregard of the laws of hygiene, cause the mortality to exceed that of nearly every other town on the Continent.

Fig. 88.—Florence: the Duomo and Palazzo Vecchio.

During the Middle Ages pestilence was a frequent visitor, and Boccaccio tells us that in a single season nearly 100,000 inhabitants, or two-thirds of the entire population, were swept away by it. Targioni Tozetti contrasts the site of Empoli, a small town to the west, with that of Florence, and regrets that a project for removing Florence thither should not have been carried out, as proposed in 1260.

The only town of any importance in the upper valley of the Arno is Arezzo, an ancient city of the Etruscans, and at one time the capital of one of the most prosperous republics of the Middle Ages. The inhabitants ascribe to the "subtile

air they breathe the subtility of their spirits," and indeed the list of famous men connected with the town is very long. The present Arezzo, however, is a decayed place, and lives upon the memories and the monuments of a past age. Cortona, farther south, near the Lake of Trasimeno, claims to be the most ancient city of Italy; but all traces of its former greatness have disappeared. Siena, which formerly governed the whole of the hilly tract between the Arno and Ombrone, has fallen from her high estate, not without the fault of its own citizens, who were continually quarrelling amongst themselves. Siena no longer rivals Florence in population, power, or industry, but may still compare with the city on the Arno as regards its public buildings—many of them in the Gothic style—its works of art, its quaint streets and piazzas, and its magnificent position on the slopes of three hills. Chiusa, one of the most powerful towns of ancient Etruria, is of no importance now, and only attracts antiquarians in search of its ancient tombs. The vineyards of Montepulciano, on the same side of the vale of Chiani, produce the "king of wines." Volterra is only a small town now, interesting, however, on account of its cyclopean walls and a museum abounding in Etruscan antiquities. The environs are dreary in the extreme. Salt-works, yielding from 7,000 to 8,000 tons a year, quarries of alabaster, copper mines at Monte Catini, sulphur springs, and the famous *lagoni di Monti Cerboli* (see p. 242), are in the neighbourhood.

The cities at the foot of the Apennines, on the other side of the Arno, have retained their importance, for they are favourably situated for commerce. Prato, where the valley of the Arno is widest, is the centre of a rich agricultural district. The quarries of serpentine in the neighbourhood have furnished building stones for many of the most beautiful edifices of Tuscany, including the cathedral of Prato, celebrated on account of Donatello's marvellously sculptured pulpit. Pistoja, where the railway descends from the Apennines, is a busy manufacturing town. Other towns of some importance are Pescia, Capannori, in the "garden of Italy," and Lucca the industrious, with its celebrated pictures by Fra Bartolommeo.

The basin of the Serchio is of incomparable productiveness since its marsh lands have been brought under cultivation. From the ramparts of Lucca one of the most charming views may be enjoyed. On the one hand we have the towers and cupolas of the town, on the other fertile fields and orchards, with white houses peeping through the verdure, and distant hills surmounted by old towers. The impression made by this view is one of perfect peace. In a country so fertile and beautiful, it would seem, the people ought to be happy, and, if enthusiastic writers can be believed, such is really the case, and the peasants of Lucca and of Lower Tuscany in general enjoy advantages denied to their class elsewhere in Italy. They are farmers for the most part, but hold their land by long leases, and their share of its produce is regulated by ancient custom. The land, however, does not suffice for their wants, and they emigrate in thousands in search of work. Many of these emigrants work as grinders.

The inhabitants of the Upper Serchio valley, known as the Garfagnana, are as industrious as those near Lucca, which is the natural outlet for its produce. The slopes and spurs descending from the Apennines and Apuanic Alps are cultivated

in terraces. Castelnuovo, the chief town of this valley, occupies one of the most delightful spots of this picturesque district. The common people near it are said to speak the best Italian, superior even to that of the Sienese.

The valley of the Magra is far more frequented than that of Garfagnana, for the high-road from Parma to the Gulf of Spezia leads through it. In its upper portion, in the heart of the Apennines, stands the small town of Pontremoli. Its inferior portion, known as the Lunigiana, from the ancient city of Luni, is as beautiful as the parallel valley of the Serchio. At Sarzana it opens upon the sea, and to the south of that charming town, where the Apuanic Alps approach close to the sea, leaving only a narrow passage of some note in history, are situated the towns of Carrara and Massa. Carrara, the "Quarry," has replaced Luni as the place from whence the white marbles so highly esteemed by sculptors are exported, and choice blocks of which sometimes fetch £80 a cubic yard. No less than 720 quarries perforate the neighbouring hills, and about 300 of these are being worked now. The town may be likened to an agglomeration of sculptors' studios, and its Academy has trained artists of high reputation. Massa enjoys a better climate than Carrara, but its marbles are less highly esteemed. As to the marbles of Serravezza, which are quarried in the Altissimo and other mountains of the Apuanic Alps near the town of Pietra Santa, they are in many instances as beautiful as those of Carrara. Michael Angelo highly appreciated them, and had a road constructed to facilitate access to them. The quarries and mines in the neighbourhood also yield slates, iron, lead, and silver.*

These towns at the foot of the Apuanic Alps were bound to prosper in proportion as the country increased in wealth, whilst Pisa, the great commercial republic of mediæval Tuscany, was doomed to decay, owing to the silting up of its harbour. This Porto Pisano was situated about ten miles to the south of what was then the mouth of the Arno. In 1442 its depth had been reduced to five feet, a century later only rowing boats could enter it, and soon after it was abandoned definitely. There are no traces of it now, and its very site is disputed. But though Pisa is dead—*Pisa morta*—the city still possesses admirable monuments of its past grandeur. It has a wonderful cathedral; an elegant baptistery; its Campo Santo, with the famous frescoes of Orgagna and Gozzoli; and a leaning tower commanding a view of the Pisan hills and the alluvial plains of the Arno and Serchio. Its commerce has dwindled away, but it is still the capital of a rich agricultural district, and its university is one of the best in Italy. It possesses, moreover, that which no change in the commercial highways can deprive it of, a mild climate, and during winter attracts numerous visitors from the north.

Leghorn, or Livorno, has inherited the commerce of Pisa. It is the natural outlet of the fertile districts of Tuscany, and its commerce is far more important than might be supposed from the unfavourable configuration of the coast, and is surpassed only by that of Genoa and Naples.† Thousands of Spanish and

* 134,000 tons of marble were quarried in 1873, valued at nearly £500,000 sterling.

† In 1873 5,466 vessels of 920,626 tons entered: 5,314 vessels of 901,533 tons cleared, inclusive of coasting vessels.

Portuguese Jews who found a refuge here have contributed in no small measure to the development of the resources of the town. From an architectural point of view, Leghorn is one of the least interesting cities of Italy, but as the outcome of human labour it is one of the most curious. Before the city could be built, the swamps which occupied its site had to be drained, and an artificial harbour had to be excavated for the protection of vessels. Numerous canals intersect the north-western portion of the town, which is known as New Venice. A huge breakwater marks the entrance to the harbour, and on a sand-bank in the offing rises the tower of Meloria, which recalls the naval engagement in which the fleet of the Pisans was destroyed by the Genoese.

Fig. 89.—The Harbour of Leghorn.

Scale 1 : 112,500.

Insular Tuscany consists of Elba and several smaller islands, which mark the site of an isthmus that formerly joined the mainland to Corsica, and contribute greatly towards the beauty of the Tuscan littoral.

Elba, once the miniature kingdom of Napoleon, is larger than all the other islands together.* An ancient dependency of the Etruscan city of Populonia, Elba rises above the blue waters of the Tyrrhenian a picturesque group of mountains. A narrow and dangerous strait separates its steep coasts from the promontory of Piombino, where passing vessels were formerly obliged to pay toll.

The granitic heights of Monte Capanne, the eastern extremity of the island,

* Area, 85 square miles; population, 21,722 souls.

attain an elevation of 3,303 feet; the dome-shaped hills of serpentine at the other extremity are 1,600 feet in height, and the centre of the island is occupied by hills of various formations, covered with brushwood. The variety of rocks is very great, taking into account the small extent of the island. Associated with the granites and serpentine, we meet with beds of kaolin, and with marble similar to that of Carrara. Remarkable crystals and precious stones abound to such an extent, that Elba has been likened to a "mineralogical cabinet" on a vast scale.

Formerly, when the sea was infested by pirates, the inhabitants retreated to the recesses of the interior, or to the summits of steep promontories, where the picturesque ruins of ancient fortifications may still be seen. Several of the old inland villages continue to be inhabited; amongst others, that of Capoliberi, the "Mountain of the Free," which is looked upon as a sort of acropolis. After the suppression of piracy the islanders came down to the *marina*, or coast, and established themselves in the towns of Porto Ferrajo, Porto Longone, Marciana, and Rio. The resources of the island are considerable, and afford plenty of occupation to fishermen, salt-makers, wine-growers, and gardeners. The inhabitants are hospitable, and, though neighbours of the fierce Corsicans, they possess all the gentleness of Tuscans.

Elba is not, however, so much noted on account of its fisheries, vineyards, salt-works, or commerce, as because of its rich deposits of iron ore. The russet-coloured cliffs of ironstone are visible from the mainland. The huge excavations made by the miners, many of whom are convicts, resemble the craters of extinct volcanoes, and the reddish brown, violet, or blackish colour of the rocks helps the illusion. Of the quantity of ore carried away from here in the course of twenty-five or thirty centuries we can hardly form a conception. The ironstone is bedded in layers, differing in colour according to the nature of the earthy ingredients, and rising into hills 600 and more feet in height, the slopes of which are covered with brushwood (*macchie*). Shovels and spades are the only mining tools required in clearing away these heaps of ore, of which at least 100,000,000 tons remain. By regular mining operations 500,000 tons might be obtained annually during twenty centuries. The annual produce at present hardly exceeds 100,000 tons. The ore is more particularly suited to the manufacture of steel. Loadstones abound near Capo Calamita. The mariners of the Mediterranean formerly made use of them in the construction of a primitive ship's compass, by placing them in a piece of cork, which they allowed to float in a basin of water.

The smaller islands of the Tuscan archipelago are—Giglio, with quarries of granite; Monte Cristo, a pyramidal rock rising 2,130 feet above the sea-level; Pianosa, with an agricultural penal settlement; Capraja, with a small town built within an amphitheatre of pink-coloured granite; and Gorgona (987 feet).*

* Population of the principal towns of Tuscany (in 1871):—Florence (Firenze), 167,093; Leghorn (Livorno), 89,462; Pisa, 41,796; Siena, 22,965; Lucca, 21,286; Prato, 15,924; Carrara, 10,848; Pistoja, 12,966; Arezzo, 11,151; Viareggio, 9,983; Pontedera, 7,991; San Casciano, 6,862; Fojano della Chiana,

V.—The Roman Apennines, the Valley of the Tiber, the Marches, and the Abruzzos.

That portion of the Italian peninsula which has Rome for its centre may be likened to the trunk of the body, for it is there the Apennines attain their greatest height, and nowhere else to the south of the Po are rivers of equal magnitude met with.*

The main rampart of the Apennines runs parallel to the coast of the Adriatic. To the mariner, who sees these mountains rise above the verdure of the littoral region, they have an appearance of the greatest regularity. Summit rises beyond summit, one lateral chain succeeds to the other, and every one of the numerous valleys descends perpendicularly to the coast. The slope throughout is steep, and the geological strata, whether of Jurassic, cretaceous, or tertiary age, succeed each other regularly from the snow-clad summits down to the promontories of the coast. The only irregularity consists in a detached group of hills (1,880 feet) to the south of Ancona, above which the axis of the Apennines changes its direction. This region of Italy is the natural counterpart of Liguria. The position of Ancona corresponds with that of Genoa, and the coast, which extends on the one hand to Emilia, and on the other towards the peninsula of Monte Gargano, may fairly be likened to the "Rivieras" of Genoa, with this exception, that its direction is inverse. The territory between the mountains and the coast is narrow, the littoral road frequently winds round promontories, and the towns extend up the hill-sides. Still this portion of Italy is not as strongly protected by nature as Liguria. Towards the north it expands upon the plain of the Po, whilst the terraces at the foot of the main range of the Apennines afford easy access from the west. During the whole of the Middle Ages and down to our own days neighbouring states have fought for the possession of this territory, which has become known, from this circumstance, as the "Marches;" that is, the disputed frontier districts, where every town is a fortress perched on the top of a hill.

The Apennines forming the boundary between the Marches and Latium, or Rome, like those of Etruria, are grouped in separate mountain masses. The first of these commands the valley of the Tiber in the east; it extends in the north to Monte Comero (3,828 feet) and the Fumajolo, or head-stream of the Tiber, and in the south to Monte Verone (5,006 feet). Though inferior in height to other parts of the Apennines, these mountains are known as the *Alpe della Luna*. A gap,

6,127; Empoli, 5,949; Volterra, 5,796; Massa Maritima, 5,766; Porto Ferraio, 5,779; Fucecchio, 5,755; Figline Valdarno, 5,673; Montalcino, 5,186; Pontassieve, 5,141; Pontelungo, 5,039; Buti, 5,029; Massa, 4,786; Orbetello, 4,674; Pontremoli, 4,473.

	Area, Square Miles.	Population (1871).	Density.
* Rome	4,552	836,700	184
Umbria	3,720	549,600	148
Marches	3,751	915,420	244
Abruzzos	4,898	918,770	188
	16,921	3,220,490	190

through which passes the road from Perugia to Fano, separates them from Monte Catria (5,585 feet). At that point the Apennines bifurcate, and two parallel ranges can be traced thence for a distance of 120 miles, as far as the transverse range of the Majella (9,158 feet), which reunites them, and from which radiate the mountains of Southern Italy. These parallel chains belong to the Jurassic and cretaceous formations, and neither of them forms a water-parting, for whilst the Nera and other rivers tributary to the Tiber force themselves a passage through the western one, that on the east is broken by numerous gorges, through which rivers and torrents find their way into the Adriatic. The most considerable of these rivers is the Pescara, which rises on the plateau of the Abruzzos, where it is known as the Aterno, and traverses the eastern range where it is highest. The gorge excavated by this river is sufficiently wide to afford space for a railway joining the Adriatic to the basin of the Tiber.

The plateau of the Abruzzos, enclosed by these parallel ranges, may be looked upon as the natural citadel of Central Italy. On its western side rise the double pyramids of Monte Velino (8,157 feet); in the north Monte Vettore (8,131 feet) forms the termination of the range of the Sibillini; in the east rises the culminating point of the Apennines, a mountain covered with snow the greater part of the year, and appropriately called the "Great Rock of Italy"—"Gran Sasso d'Italia" (9,518 feet). The fact that this magnificent mountain is the highest in all Italy has been known from times immemorial. The Romans conceived they had discovered the "umbilic of Italy" in a small lake near it, upon which floated an island formed of rank vegetation. The Marsi and their allies, when they took up arms against their Roman oppressors, chose Corfinium, in its neighbourhood, for the seat of their empire, and surnamed it Italica; and there, too, the first movements which led to the resurrection of modern Italy took place. The Gran Sasso, as seen from the Adriatic, affords a magnificent spectacle. Its calcareous masses cannot boast of much beauty of profile, but this is compensated for by the fine Alpine region extending beneath its summit, which remains the haunt of bears and chamois, and where rare plants in the meadows remind us of Switzerland. Forests of beeches and pines are still met with in a few places, and are all the more appreciated as forests no longer exist in the lowland regions. This universal destruction of the forests is one of the great misfortunes of Italy. In many parts of the Roman Apennines even the soil has been washed away, and only in a few crevasses do we meet with brooms and briers.

The valleys on the western slope of the Apennines are enclosed between calcareous spurs of the main range, some of which attain a considerable elevation. The Tiber itself thus passes between two lofty mountains, rising at the lower extremity of two of these Sub-Apennine spurs, and forming a kind of triumphal gateway. These are the Soracte (2,270 feet) and Gennaro (4,162 feet). These fine mountains, with the Sabine Hills and the volcanic groups near them, form the horizon of the Roman Campagna, and their natural beauties are enhanced by the memories of art and history which attach to them.

Several ranges of hills and detached mountain groups of calcareous formation,

PEASANTS OF THE ABRUZZOS.

like the Sub-Apennines, border upon the shore of the Tyrrhenian Sea and the marshes which extend along it. Such are the hills, rich in alum, which are grouped around the ancient trachytic cone of the Tolfa. Such, too, are the Monte Lepini (4,845 feet), the naked crest of which has been likened to an ass's back—*schiena d'asino*—and which bound the Pontine Marshes on the east. In some of the recesses of these hills there still exist forests of chestnut-trees and beeches, where the descendants of the ancient Volsci may pasture their hogs; but almost everywhere else the hill-sides are bare of vegetation, and the scorching rays of the sun have split the rocks into innumerable angular fragments. To the east of the marshes rises a summit with ten pinnacles, covered with dense shrub on the land side, but barren towards the sea, a few stunted palms excepted, which grow in the fissures of the rock. This isolated hill, a counterpart of the Argentaro of Tuscany, is the Circello (1,729 feet), famous as the residence of the enchantress Circe. The grotto where she changed human beings into animals is still pointed out there to the curious, and the remains of cyclopean walls recall the mythical age of the Odyssey. The ancient Greeks, who were but imperfectly acquainted with Italy, looked upon this dreaded promontory of Circe as one of the most important islands of the Western Cyclades.

During the glacial period the sea, in which have been deposited the chalk and other rocks composing the Sub-Apennines, was the scene of volcanic action on a grand scale. The matter ejected was heaped up in a line of volcanic cones, running in a direction nearly parallel with the Apennines and the coast of the Mediterranean. These cones are joined to each other by thick layers of tufa, which cover the whole of the plain as far as the foot of the calcareous mountains, and extend for a distance of nearly 120 miles, from Monte Amiata, in Tuscany, to the mountains of Albano, being interrupted only by the alluvial valley of the Tiber. Ponzi and other geologists are of opinion that this tufa was ejected from submarine volcanoes, carried away by the currents, and equally distributed over the depressions of the sea-bottom. No fossils have been discovered in it hitherto, which is accounted for by the presence of icebergs, which prevented a development of animal life.

This volcanic region is remarkable on account of its numerous lakes. The largest of these, that of Bolcena, was formerly looked upon as an ancient crater. This crater would have exceeded by far the largest volcanic vents met with in the Andes or in Java, for it has a circumference of twenty-five miles, and covers an area of forty-four square miles. Modern geologists, however, look upon this crateriform lake as a basin of erosion, and though it occupies the centre of a plateau formed of ashes, scoriæ, and lava, these do not form a steep edge towards the lake, as in the case of veritable craters in the same district. One of the most remarkable of these latter is that of Latera, to the west of the lake, in the centre of which rises a cone of eruption, the Monte Spignano, which has a diameter of nearly five miles.

The district of the Bolsena is likewise remarkable on account of its vertical precipices of tufa and lava. Its picturesque towns and villages are perched upon

bold promontories looking down on the valleys. The old town of Bagnorea occupies the extremity of an immense mole, and is joined to the new town by a giddy path, bounded by steep precipices, which timid travellers do not care to venture upon. Orvieto stands on an isolated rock resembling a fortress. Pittigliano is surrounded by precipices: by cutting away a few yards of the narrow isthmus which joins it to the rest of the plateau, access to it would be impossible to all but birds. In the Middle Ages, when nobles and towns were continually at war, the capture of one of these eyries was looked upon as a grand achievement.

Lake Bolsena discharges its surplus waters through the Marta into the Mediterranean. The fine Lake of Bracciano, to the south of it, gives rise to the Arrone. It, too, appears to be a basin formed by a subsidence of the ground or erosion, and not a crater. The Lake of Vico, on the other hand, clearly

Fig. 90.—The Lake of Bolsena.

Scale 1 : 457,000.

occupies an ancient volcano, though its rampart has been gutted towards the east. Close to the lake, and within the encircling rampart, rises Monte Venere, a perfect cone, the gentle slopes of which are luxuriantly wooded. Formerly the lake surrounded this cone, but the breach through which its emissary escapes to the Tiber having gradually been deepened, the waters of the lake subsided. Tradition says that an ancient city lies at its bottom.

On crossing the Tiber we reach the beautiful volcanic group of Albano, within the great crater of which may still be traced the remains of several secondary craters, some of them occupied by lakes. The principal one of these, Monte Cavo (2,790 feet), rises in the very centre of the exterior rampart. Tradition points it out as one of Hannibal's camps. The exterior slopes of the mountain consist of pozzuolana, small stones, and ashes, through which the torrents have dug out furrows in divergent directions. The diversity of these

volcanic products enables us to trace the phases of activity of this Roman Vesuvius, which was active at a much more recent epoch than the volcanoes farther north, and sent its streams of lava to the very gates of Rome.

The Lake of Albano discharges its surplus waters through a tunnel 7,665 feet in length, which has been in existence for more than twenty-two centuries. The

Fig. 91.—Volcanoes of Latium.
From the Austrian Staff Map
Scale 1 : 294,000.

lake is famous on account of a small crab, large numbers of which are forwarded to Rome during Lent. It is the only species of this animal hitherto discovered in fresh water, and zoologists conclude from this that the crater now occupied by the lake formerly communicated with the sea, but was separated from it by slow upheavals and the ejection of volcanic products. Flint implements and vases of baked clay, discovered in the thick layers of volcanic peperino, prove that at the

period of the earliest eruptions the country was already inhabited by a civilised population. Some of the vases referred to are doubly precious, for they present us with delineations of the houses of that prehistoric epoch. Roman coins and clasps of bronze, discovered in the upper layers of lava, prove that these are comparatively recent. In fact, the most diverse developments of civilisation have left their traces in these ancient craters. Alba Longa and other towns of the Latins have been replaced by Roman cities; then came the castles of the popes, and of other high dignitaries of the Church; and at present these hills are one of the chief resorts of the crowds of strangers who flock to Rome from every quarter of the world. On the culminating point of Monte Cavo stood the famous temple of Jupiter Latialis, where the Latins celebrated their federal Feriæ. The last remains of this temple were swept away in 1783, to be used in the construction of a church. From its site the eye embraces a view extending to the hills of Sardinia.

The Lake of Nemi no longer reflects in its bluish waters the foliage of luxuriant trees, or the walls of that dreaded temple of Diana whose priest was only allowed to assume office after he had killed his predecessor in a duel. It, too, has its subterranean emissary, like the Lake of Albano. As to the Regillus, famed for the defeat of the Latins by the Romans, it has dried up, whilst the incrustating Lake of Tartari and that of the Solfatara, with its floating islands, are mere shallow ponds, which owe their fame almost exclusively to the vicinity of Tivoli.

All these volcanic lakes are of considerable depths, whilst the lakes in the calcareous regions are shallow.* One amongst them, that of Fucino, has been drained recently, and the same fate is in store for that of Trasimeno. Lake Fucino originally occupied an area of 104 square miles, and its surplus waters discharged themselves towards the north-west into the Salto, a tributary of the Tiber. At an epoch not known to us the dimensions of the lake became less. It no longer discharged an effluent, but its waters rose and fell according to whether the seasons were wet or dry. Occasionally they rose as much as 50 feet, and two cities, Marruvium and Pinna, are said to have been swallowed up during one of these floods. At other times it was reduced to a swamp. The ancient Romans, desirous of suppressing a hotbed of fever, and of gaining fertile soil for agriculture, attempted to drain this lake. Claudius employed 30,000 slaves for eleven years in cutting a passage through the mountains from it to the Liri. This great work was carried on under the direction of the greedy Narcissus, but it turned out a failure, for after a short time the tunnel became choked. In the thirteenth century an attempt was made to reopen this tunnel, but the drainage of the lake has only been achieved quite recently, in accordance with plans designed by M. de Montricher, and carried out at the expense of Prince Torlonia. Between

* Volcanic Lakes:—*Bolsena:* area, 42 sq. m.; height, 995 ft.; depth, 460 ft. *Bracciano:* area, 22 sq. m.; height, 495 ft.; depth, 820 ft. *Albano:* area, 2·3 sq. m.; height, 1,000 ft.; depth, 466 ft. *Nemi:* area, 0·8 sq. m.; height, 1,108 ft.; depth, 164 ft. Shallow Lakes:—*Trasimeno:* area, 46 sq. m.; height, 843 ft.; depth, 21 ft. *Fucino* (in 1860): area, 61 sq. m.; height, 2,300 ft.; depth, 92 ft.

1855 and 1869 a new tunnel was excavated on the site of the ancient one, and nearly 150,000,000 cubic yards of water were conveyed through it into the Liri, and thence to the sea. The whole of the ancient lake bed has been converted into smiling fields, traversed in all directions by carriage roads; houses have been erected on spots formerly covered with water; fruit and ornamental trees have been planted; and the salubrity of the country leaves nothing to be desired now. Some idea of the progress made in the art of engineering since the time of the Romans may be formed by comparing this new tunnel with the old one. The latter was 18,500 feet in length, had an average section of 12 square yards, and cost (according to M. Rotrou) £9,840,000. The new tunnel has a length of 20,680 feet, a section of 24 square yards, and cost £1,200,000.

Fig. 92.—The Ancient Lake of Fucino.
Scale 1 : 412,000.

The Lake of Perugia, better known as the Lake of Trasimeno, on account of the terrible memories which attach to it, still retains nearly the dimensions which it had at the dawn of history. If this lake were to rise only a few feet, its surplus waters would find their way into the Tresa, a tributary of the Tiber; but its basin is shallow, and evaporation suffices for carrying off the water conveyed into it by its tributary rivulets. Amongst these is the famous Sanguinetto, on the banks of which the armies of Hannibal and Flaminius were engaged in battle, when,

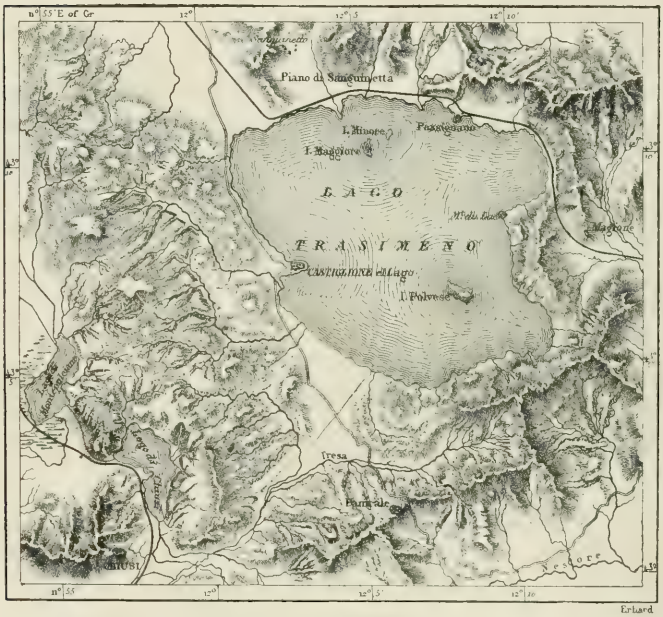
> "beneath the fray,
> An earthquake reeled unheededly away."

The lake, with its islands and charming contours, is beautiful to look upon, but the low hills surrounding it are sterile, the climate is insalubrious, its waters harbour but few fish, and the inhabitants on its shores look impatiently forward

to the time when the engineers will fulfil their promise of winning for agriculture 30,000 acres of fertile land now covered by the waters of the lake.

But far more urgent, on sanitary and economical grounds, are the claims of the Roman Campagna; that is, of the region lying between the Tolfa of Civita Vecchia, Monte Soracte, the Sabine Hills, and the volcanoes of Latium. Slavery and maladministration have converted a fertile region into a desert extending to the very gates of Rome. Painters are enraptured with this Roman Campagna; they admire its melancholy aspect, its picturesque ruins hidden beneath brambles,

Fig. 93.—Lake of Trasimeno.
From the Austrian Staff Map.
Scale 1 : 250,000.

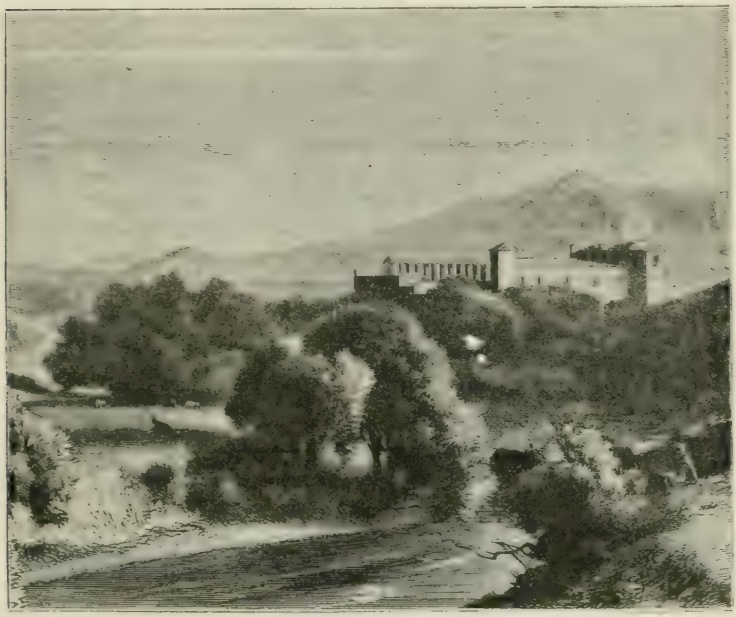


its solitary pines, its pools reflecting the purple clouds, and visited by thirsty buffaloes. True this region, bounded by hills of bold contours, is full of grandeur and sadness; but the air that hangs over it is deadly, the soil and climate of this *Agro Romano* have deteriorated, and fever now reigns there supreme.

Two thousand years ago the Roman Campagna, which covers an area of 600,000 acres to the north of the Tiber, and extends from the sea to the mountains, was a fertile and carefully cultivated country. Then its inhabitants were reduced to the condition of serfs, the Roman patricians appropriated the land, and

covered it with villas and parks. When these magnificent residences were given up to pillage and to flames, the cultivators of the soil dispersed, and the country immediately became a desert. Since that epoch most of the Agro is held in mortmain by ecclesiastical corporations or princely families, and whilst all the rest of Europe has been making progress, the Campagna has become even more sterile and insalubrious. Swamps continually invade the lowlands, and an atmosphere charged with miasmata hangs even above the hills. Malaria has already knocked at the gates of Rome, and the fevers produced by it decimate the population of its suburbs.

Fig. 94.—The Roman Campagna.



Not a village, not even a hamlet, is met with throughout this afflicted region. The only buildings are the wretched storehouses of the proprietors, whose wide domains are roamed over by herds of half-wild grey cattle, said to have been introduced into Italy by the Huns, and distinguished by immense horns, frequently suspended in the huts of the peasantry, who fancy that they keep off the "evil eye." The soil of these neglected pastures consists of alluvium mixed with volcanic débris and marls, but only a few patches are cultivated. The farmers and labourers who engage in this labour carry their lives in their hands, and are frequently struck down by fever before they are able to regain their villages in

the hills. What can be done to restore to this region its fertility, salubrity, and population? No doubt it will be necessary to drain the marshes, and to plant trees capable, like the Eucalyptus, of absorbing the poisonous miasmata; and this has been done, with a considerable amount of success, since 1870, near the abbey of Tre Fontane. But, above all, it will be necessary to interest the cultivator of the soil in its productiveness. Even in the most salubrious districts of the ancient Papal dominions the population is being decimated by misery and the maladies following in its train. In the valley of Sacco, to the south-east of Rome, which abounds in cereals, vines, and fruit trees, the cultivator of the soil is restricted to a diet of maize, for proprietors and money-lenders eat up the rest of his produce.

An uncultivated and insalubrious region extends, likewise, along the sea to the south of the Tiber. Poisonous vapours arise from the stagnant waters separated by dunes from the sea, and in order to escape them it is necessary to seek a refuge in the hills of the interior, or even on jetties built out into the sea, as at Porto d'Anzio. The palaces which formerly lined the shore from Ostia to Nettuno, and from the ruins of which have been recovered some of our most highly valued art treasures, such as the Gladiator and Apollo Belvedere, have been buried long ago beneath the dunes or in the swamps. The most dreaded of these malarial districts lies at the foot of the Monti Lepini, and extends from Porto d'Anzio to Terracina. It is known as the Pontine Marshes, from an ancient city named Pometia, which no longer exists. No less than twenty-three cities formerly flourished in what is now a deserted and deadly country, but which was the most prosperous of the districts held by the confederation of the Volsci. The Roman conquerors created "peace and solitude" at the same time. Four hundred and forty years after the building of Rome, when Appius constructed his famous road to Terracina, the country was only a swamp. Various attempts have been made since to reclaim this region, but it still remains the haunt of boars, deer, and semi-savage buffaloes, whose ancestors were imported from Africa in the seventh century. The canals dug during the reign of Augustus appear to have been of little use; the works undertaken by Theodoric the Goth were more efficacious; but stagnant waters and malaria in the end regained the mastery. The engineers employed by Pius VI. towards the close of the eighteenth century failed likewise, and this district of 290 square miles remains a wilderness to the present day. If a brigand seeks refuge in it, pursuit is stopped, and he is allowed to die in peace.

In order to drain these marshes an accumulation of difficulties will have to be surmounted. A range of wooded dunes bounds the marshes on the west. Having crossed these, we enter a second zone of marshes, which are separated from the sea by a second range of dunes, extending northward from the Monte Circello, and likewise densely wooded. These two formidable barriers would have to be surmounted in order to drain the marshes towards the west. Nor are the prospects more promising in the direction of Terracina, for there, too, every outlet is stopped by dunes. The streams and canals crossing the marshes are, moreover, choked up with a dense

growth of aquatic plants, which impedes the circulation of the water, feeble though it be. Herds of buffaloes are sometimes driven into these streams to trample down the vegetation, but neither this barbarous procedure nor the more regular process of mowing has availed against its rapid and luxuriant growth, and the water

Fig. 95.—The Pontine Marshes.

remains stagnant. Rains are not only heavy in this portion of Italy, but the superabundant waters of neighbouring river basins actually find their way through subterranean channels into the depression occupied by the Pontine Marshes. This happens after heavy rains in the case of the Sacco, a tributary of the Garigliano, and of the Teverone, a tributary of the Tiber, and to this circumstance

must be ascribed the curious fact first ascertained by M. de Prony, viz. that the volume of water annually discharged by the Badino, which drains the marshes, exceeds by one-half the whole of the rain which annually descends upon them. When this happens the whole of the country is under water. Another danger arises during dry weather. It happens then occasionally that the parched vegetation is ignited through the carelessness of herdsmen; the fire communicates itself to the turfy soil, and the latter smoulders until the subsoil water is reached. In this manner tracts of land which were looked upon as secure against every inundation are converted into marsh. During the greater portion of the year the Pontine Marshes present the appearance of a plain covered with herbage and flowers, and it is matter for surprise that a country so fertile should be without inhabitants. The town of Ninfa, which was built in the eleventh century, near the northern extremity of the plain, has since been abandoned, its walls, houses, and palaces still remaining, covered with ivy and other creeping plants.

There can be no doubt that our engineers would be able to reclaim this desolate region. The system adopted in the case of the valley of the Chiana may not be practicable, but other, if more costly, means may be devised. Whatever the outlay, it is sure to be productive, for even now the marshes yield rich harvests of wheat and maize.

The Tiber, or Tevere, the great river of the Romans, has defied all attempts at correction down to our own days, and its sudden floods are said to be even more formidable now than they were in the days of the Republic. Ever since the time of Ancus Martius there has been going on a struggle against the alluvium brought down by the river, and it will need all the skill of the Italian engineers to master this difficult problem.

The Tiber is by far the most important river of the peninsular portion of Italy, and its basin is the most extensive.* It is, too, the only river that is navigable in its lower course, from Ostia to Fidenæ. The Tiber rises on the western slope of the Alpe della Luna, in the latitude of Florence. The valley through which it flows, whilst in the heart of the Apennines, is of surpassing beauty; at one time it expands into broad and fertile basins, at others it is hemmed in by precipitous rocks. Below the charming basin of Perugia the Tiber receives the Topino, formed by the confluence of several streams in the old lacustrine basin of Foligno, one of the most delightful districts of all Italy, situated at the foot of the Great Apennines and of the Col Fiorito, which leads across them. The Clituno (Clitumnus) debouches upon this plain, famous on account of its pellucid waters:—

> "The most living crystal that was e'er
> The haunt of the river nymph, to gaze and lave
> Her limbs."

The ruins of a beautiful temple still remain near the source of this river, but the miraculous power of the latter of changing into a brilliant white the wool of the sheep grazing upon its sacred banks has gone for ever.

* Basin, 6,475 square miles; length, 260 miles, of which 60 are navigable.

The Nera is the most important tributary of the Tiber; "it gives it to drink," as the Italian proverb says, and rivals it in volume. It is formed by the junction of several streams descending from the Sibylline Mountains, Monte Velino, and the Sabine Hills. About two thousand years ago, it is said, most of these rivulets did not reach the Tiber; they were intercepted in the plain of Rieti, where they

Fig. 96.—Ancient Lacustrine Basins of the Tiber and Topino.

Scale 1 : 240,000.

5 Miles.

formed the Lacus Vel'nus, represented at the present day by a few ponds and marshes scattered over the fertile fields of the "Garden of Roses." A breach effected in the calcareous rocks, and several times enlarged since, allowed the pent-up waters of the Velino to escape to the Nera, and in doing so they formed those beautiful cascades of Marmora, above Terni, whose charms have been celebrated by poets and painters. The river falls down a perpendicular height of

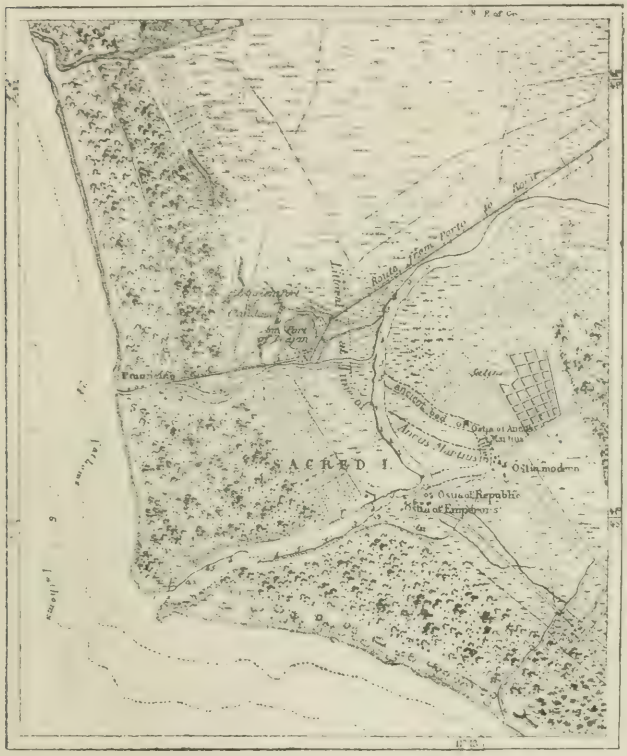
542 feet in a single sheet, and then rushes down, over heaped-up blocks of rock,

Fig. 97.—The Cascades of Terni.

until it joins the more placid waters of the Nera. Far less grand, but perhaps

more charming, are the numerous cascatellas of the Anio, or Teverone, the last affluent of any importance which the Tiber receives above Rome. Standing on the verdant hill upon which is built the picturesque town of Tivoli, silvery cascades may be seen to escape in every direction. Some of them glide down the polished rocks; others shoot forth from gloomy arches, remain suspended an instant in the air, and then disappear again beneath the foliage; but every one of them, whether

Fig. 98.—The Delta of the Tiber.



a powerful jet or a mere thread of water, possesses some charm of its own, and, as a whole, they form one of the most delightful spectacles to be witnessed in Italy. It is these cascades which have rendered Tivoli famous throughout the world; and in spite of the popular rhyme—

"Tivoli di mal conforto,
O piove, o tira vento, o suona a morto!"—

modern residences have taken the place of the villas of the ancient Romans,

Fig. 69.—Peasants of the Roman Campagna.

amongst which that of Hadrian was the most sumptuous. Its ruins, to the west of Tivoli, cover an area of three square miles. Recently it has been proposed to

utilise the great water power of the Anio far more extensively than has been done hitherto. The ancients contented themselves with quarrying the concretionary limestone, or travertin, deposited by the calcareous waters of the river, sometimes to the depth of a hundred feet. They made use of this stone for the construction of their public buildings. Travertin, when first quarried, is white; after a certain time it turns yellow, and subsequently assumes a beautiful roseate hue, which imparts a character of majesty to the edifices constructed of it.

Below their confluence with the Anio, the yellow waters of the Tiber, discoloured by the clay brought down from the plains of Umbria, rush beneath the bridges of Rome. Soon afterwards the river winds round the last hills, which formerly bounded an ancient gulf of the sea, now silted up. The influence of the tides makes itself felt. At the head of the Sacred Island, formerly dedicated to Venus, and famous for its roses, but now a dreary swamp covered with reeds and asphodels, it bifurcates. The principal branch, the old Tiber, passes to the south of this island. Ostia, which was the port of the river during the early days of Rome, is buried now beneath fields of cereals and thistles, at a distance of five miles from the sea. Excavations made there since 1855 have laid bare several temples, tombs, and warehouses. The merchants of Rome were compelled to abandon that city two thousand years ago, on account of a bar formed at the mouth of the river.

The Roman emperors, anxious to have an outlet into the sea, ordered a ship canal to be excavated to the north of Ostia. This is the Fiumicino, which the erosive action of the Tiber has converted into a small river. Claudius had huge docks excavated to the north of this canal, and a new Ostia arose near them. Trajan opened another port to the south-east of it, which remained for several centuries the port of Rome. But it, too, has been silted up for about a thousand years, and the alluvium brought down by the Tiber is continually encroaching upon the sea, the rate of progress being about three feet annually at the mouth of the Fiumicino, and ten feet at that of the old Tiber. Extensive ruins of palaces, baths, and storehouses exist near the ancient port of Trajan, and several works of art have recently been excavated there.

The mouth of the Tiber is thus closed by a bar, like that of all other rivers which flow into the Mediterranean; and the Romans, instead of being able to make use of their river for communicating with the sea, are obliged to have recourse to more distant harbours. In former times they kept up this communication with Sicily, Greece, and the Orient through Antium, Anxur (Terracina), and even Puteoli; but since the countries of the North have risen into political and commercial importance, Civita Vecchia has become the great maritime entrepôt of the valley of the Tiber. It is well known that Garibaldi has conceived the stupendous project of converting Rome into a great maritime city. The stagnant waters of the Campagna are to be carried off by means of a huge sanitary canal, the bed of the Tiber is to be deepened, and an artificial harbour capable of receiving the largest vessels is to be constructed far out in the Mediterranean.

The execution of this vast scheme is no doubt attended with immense difficulties, not the least amongst which are the annual floods of the Tiber. Ancient writers tell us that these inundations were dreaded not only because of the damage done directly, but also because of the great quantities of animal and vegetable deposits which remained in the fields after the subsidence of the waters. The nature of these floods has continued the same down to the present time. At Rome, though its distance from the sea is only twenty-two miles, the river frequently rises forty or fifty feet, and in December, 1598, it rose sixty-five feet! How is this huge volume of water to be disposed of after it has passed beneath the bridges of Rome? If the destruction of the forests in the Apennines is one of the principal causes of these floods, will it be sufficient to replant them? Or would it be preferable to restore some of those ancient lakes into which numerous rivers discharged themselves, which now take their course to the sea? The difficulties are great indeed, for the western slope of the Apennines is exposed to the rain-bearing westerly and south-westerly winds, and the floods of every one of the numerous tributaries of the Tiber take place simultaneously, and combine to form one vast inundation.

It is by no means difficult to account for the great floods of the Tiber which take place in winter, but the condition of the river during summer has for a long time baffled inquiry. The level of the river during the dry season is far higher than could possibly be accounted for by the small quantity of rain which falls within its basin. Its volume in summer is never less than half its average volume, a phenomenon not hitherto observed in the case of any other river. The Seine has a basin five times larger than that of the Tiber, and its average volume is almost double; yet, after a continuance of dry weather, its volume is only a third or fourth of the Italian river. This perennity of the Tiber can only be accounted for by assuming that it is fed, during the dry season, from subterranean reservoirs, in which the water is stored up during winter. These reservoirs must be very numerous, if we are to judge by the numerous "sinks," or "swallows," met with on the calcareous plateaux of the Apennines. One of these sinks, known as the "Fountain of Italy," near Alatri, close to the Neapolitan frontier, has the appearance of a huge pit, 160 feet in depth and 300 feet across. Its bottom is occupied by a forest, and numerous springs give rise to luxuriant herbage, upon which sheep lowered by means of ropes feed with avidity. It is from sinks like this that the rivers of the country, the Tiber and the Sacco, are fed. It has been computed by Venturoli and Lombardini, the engineers, that about three-fourths of the liquid mass of the Tiber during winter are derived from subterranean lakes hidden in the depths of the Apennines. The volume of water annually supplied from this source to the Tiber would fill a basin having an area of 100 square miles to a depth of 80 feet! *

Primitive Rome is to a large extent indebted for her power to the Tiber, not

* Annual rainfall at Rome, 30·7 inches; at the foot of the Apennines, 43·3 in.; on the summits, 94·5 in. Volume of the Tiber: average 10,180 cubic ft.; maximum, 60,400 cubic ft.; minimum, 4,650 cubic ft., a second.

because that river is navigable, but because it traverses the centre of a vast basin, of which Rome is the natural capital. Rome, moreover, occupied a central position with regard to the whole of Italy and the world of the ancients; but, as has already been pointed out, Rome no longer lies upon any of the great high-roads of nations. That city certainly occupies not only the centre of Italy, but of all the countries surrounding the Tyrrhenian Sea; and its climate would leave little to be desired, if it were not for the insalubrity of the Campagna. Still Rome, though the residence of two sovereigns, the King of Italy and the Pope, is not even the principal city of the peninsula, and still less so the capital of the Latin race. It is said that during the Middle Ages, when the popes resided at Avignon, the population of Rome was reduced to 17,000 souls. Gregorovius, than whom no one is better acquainted with that epoch in the history of Rome, doubts this; but there can be no doubt that after the sack ordered by the Constable of Bourbon its population was reduced to 30,000 souls. More recently Rome has increased rapidly, but it is still very inferior to Naples, and even to Milan.

From the very first the Romans were a mixed race. The myth of Romulus and Remus, the rape of the Sabine women, and incessant internal conflicts bear evidence to this fact. The remains of ancient cities, cyclopean walls, burial-grounds, urns, vases, and ornaments prove that on the right bank of the Tiber the Etrurians were at least as strong as the Italians. Elsewhere the Gauls predominated, and from an intermixture of all these various peoples sprang the primitive Roman.

When Rome had reached the zenith of her power things wore a different aspect, and thousands of foreigners became amalgamated with the Latins, Gauls, Iberians, Mauritanians, Greeks, Syrians, and Orientals of every race and climate; slaves, freemen, and citizens flocked towards the capital of the world, and modified the character of its inhabitants. Towards the close of the Empire there were more strangers within the walls of Rome than Romans, and when the empire of the West broke to pieces, and the empress-city was pillaged repeatedly by barbarian hordes, the Italians had already become mixed with the most diverse elements. This endless mixture between different races, victors and vanquished, masters and slaves, accounts, perhaps, more satisfactorily for the great changes which have taken place in the course of two thousand years in the character and spirit of the Romans. Still the Romans on the right bank of the Tiber, the so-called Trasteverini, have preserved the old Roman type, as transmitted to us in statues and on medals.

Rome is great because of its past, and its ruins are more attractive than its modern buildings; it is a tomb rather than a living city. These monuments, raised by the former masters of the world, strongly impress the imagination. The sight of the Coliseum arouses an admiration akin to terror, unless we look upon this formidable edifice as a mere heap of stones. The thought that this vast arena was crowded with men who sought to kill each other, that the steps surrounding it were occupied by 80,000 human beings who delighted in this butchery and

encouraged it by their shouts, calls up an amount of baseness, ferocity, and frenzy, whose existence could not fail to sap the foundations of Roman civilisation, and make it an easy prey to the barbarian. The Forum awakens memories of quite a different nature. Abominations were practised there, too, but its history as a whole exhibits it as the true centre of the Roman world. It was from this spot that the first impetus was given to the nations of the West; it was here that

Fig. 100.—Rome.

the ideas imported from every quarter of the world bore fruit. The walls, columns, temples, and churches which surround the Forum relate in mute language the principal events in the history of Rome; and if we search beneath existing edifices we meet with structures more ancient, which take us back to a period still more remote, for edifice has succeeded edifice on this spot, where pulsated the life of the Roman people. And thus it is throughout Rome. Every ancient monument, arcade, or broken column, every stone, bears witness to some

historical event, and though it may be difficult sometimes to interpret these witnesses of the past, the truth is elicited by degrees.

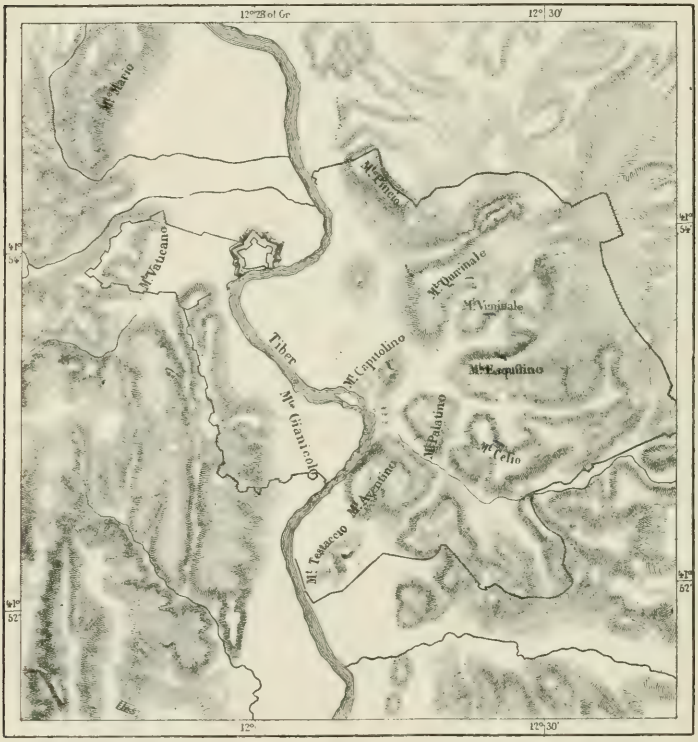
In spite of pillage and wholesale destruction, there still exist numerous ancient monuments, of which the Pantheon of Agrippa is one of the most marvellous. The Vandals, who are usually charged with the work of destruction, pillaged the city, it is true, but they demolished nothing. The systematical destruction had begun long before their time, when the materials for building the first church of St. Peter were taken from the Circus of Caligula, and from other monuments near it. The same plan was pursued in the construction of innumerable other churches and buildings of every kind. Statues were broken to pieces and used for making lime, and in the beginning of the fifteenth century there only remained six of them in all Rome, five of marble and one of bronze. The invasion of the Normans in 1084, and the numerous wars of the Middle Ages, which were frequently attended by pillage and conflagrations, wrought further havoc, but so large had been the number of public buildings and monuments, that on the revival of art in the sixteenth century many still remained for study and imitation. Since that time the architectural collection enclosed by the walls of Rome has been guarded with the utmost care, and still further enriched by the masterpieces of Michael Angelo, Bramante, and others.

On the Palatine Hill the most curious remains of ancient Rome, including the foundations of the palaces of the Cæsars and of the walls of *Roma Quadrata*, have recently been laid open. It was on this hill, so rich in precious relics, that the first Romans built their city, in order to afford it the protection of steep escarpments, and of the marshes on the Tiber and Velabro. When Rome grew more populous it became necessary to descend from this hill. The town spread over the valley of the Velabro, which had been drained by Tarquin the Etruscan, and then climbed up the surrounding hills. A small island in the Tiber occupied its centre. This the Romans looked upon as a sacred spot. They enclosed it by a masonry embankment, shaped like a ship, erected an obelisk in its centre to represent a mast, and a temple of Æsculapius upon the poop. This island was likened to a vessel bearing the fortunes of Rome.

There is still another Rome, the subterranean one, which is well worth study, for we learn more from it about early Christianity than from all the books that have been written. The crypts of the Christian burying-places occupy a zone around the city a couple of miles in width, and embrace about fifty distinct catacombs. Signor Rossi estimates the length of the subterranean passages at 360 miles. They are excavated in the tufa, and are, on an average, a yard in width, but they include chambers which served as oratories, and numerous tiers of niches for the bodies. The inscriptions, bas-reliefs, and paintings of these cities of the dead were at all times respected by the pagans, and fortunately the entrances to them were closed up at the time the Barbarians invaded Rome. This saved their contents from destruction, and everything was found intact when they were first reopened towards the close of the sixteenth century. These tombs prove that the popular belief of the Christians of that time was very different from what it is

represented to have been by contemporaneous writers, who belonged to a different class of society from that of the majority of the faithful. A serene gaiety reigns throughout, and lugubrious emblems find no place there. We neither meet with representations of martyrdoms nor with skeletons or images of Death; even the cross, which at a later epoch became the great symbol of Christianity, is not seen there. The most common symbols met with are those of the Good Shepherd carrying a lamb upon his shoulders, and the vine decked with leaves. In the oldest

Fig. 101.—The Hills of Rome.



catacombs, which date back to the second and third centuries, the figures are Greek in character, and abound in heathen subjects. One represents the Good Shepherd surrounded by the Three Graces. There are two Jewish catacombs, likewise excavated in the tufa, and they enable us to compare the religious notions which prevailed at that time amongst the followers of the two religions.

By an absurd predilection for mystical numbers, Rome is even now spoken of as the "City of the Seven Hills," although it lost all claim to such a designation

after it had outgrown the walls built by Servius Tullius. Independently of Monte Testaccio, which is merely a heap of potsherds, there are at least nine hills within the walls of actual Rome, viz. the Aventino, to which the plebeians retired during their feeble struggles for independence; the Palatino, the ancient seat of the Cæsars; the Capitolino, surmounted by the temple of Jupiter; Monte Celio (Cælius); the Esquilino; Viminale; Quirinale; Citorio; and the Pincio, with its public gardens. Besides these, there are two hills on the opposite bank of the Tiber, viz. Monte Gianicolo (Janiculum), the highest of all, and the Vatican, which derives its name from the Latin word *vates*, a soothsayer, it having once been the seat of Etruscan divination.

Faithful to its traditions, the last hill has ever since remained the place of vaticinations. When the Christian priests left the obscurity of the catacombs they established themselves upon it, and thence they governed Rome and the Western world. The Papal palace, abounding in treasures of art, was built upon it, and close to it stands the resplendent basilica of St. Peter, the centre of Catholic Christendom. A long arcade connects the palace with the Castle of Sant' Angelo, the ancient mausoleum of Hadrian. The guns of this fortress no longer defend the Vatican, for the temporal power of the pontiffs is a thing of the past; but their sumptuous church of St. Peter, with its dome rising high into the air, and visible even from the sea, its statues, marbles, and mosaics, bears witness to the fact that the riches of all Christendom formerly found their way to Rome. St. Peter's alone cost nearly £20,000,000 sterling, and is only one out of the 365 churches of the city of the popes. At the same time, the admiration which their sumptuous edifice arouses is not without its alloy. A multiplicity of ornaments dwarfs the proportions of this colossal building, and, more serious still, instead of its being the embodiment of an entire epoch of its faith and ideas, it is representative only of a transitory phase in the local history of Catholicism, of an age of contradictions, when the paganism of the Renaissance and the Christianity of the Middle Ages allied themselves in order to give birth to a pompous and sensuous neo-Catholicism suited to the tastes and caprices of the century. How different is the impression we derive from this building from that which the sombre nave of a Gothic cathedral makes upon us! It is a remarkable fact that the quarter of Rome in which the church of St. Peter is built is the only portion of the city which was laid waste by the Mussulmans in 846, who are thus able to boast of having sacked Papal Rome and taken possession of Jerusalem, whilst the tomb of Mohammed has ever remained in the hands of the faithful. As to the Jews, they did not come to Rome as conquerors. Shut up in their filthy Ghetto near the swampy banks of the Tiber, and not far from that arch of Titus which reminded them of the destruction of their temple, they have been the objects of hatred and persecution during nineteen centuries. They have survived, thanks to the power of their gold, and since their liberation from bondage they contribute even more to the embellishment of the Italian capital than do their Christian fellow-citizens.

Our nineteenth century is not favourable to the creation of edifices fit to rival

the Coliseum or St. Peter's, but there are works of another nature, not less deserving of attention, which may distinguish this third era in the history of Rome. Above all, it will be necessary to protect the city against the floods of the Tiber, and to improve its sanitary condition. The bed of the river will have to be deepened, embankments constructed, and a system of drainage established.

It is well known that the quantity of water supplied to the Rome of the ancients was prodigious. In the time of Trajan nine grand aqueducts, having a total length of 262 miles, supplied about 4,400 gallons of water per second, and this quantity was augmented to the extent of one-fourth by canals subsequently constructed. Even now, although most of these ancient aqueducts are in ruins, the water supply of the capital of Italy is superior to that of most other cities.* But if the time should ever come when Rome will occupy the whole of the space enclosed within its walls, if ever the Forum should again become the centre of the city, then the want of water will be felt there as much as in most of the other great towns of Europe.

Irrespectively of the insalubrity of the environs, there is another reason why modern Rome cannot compare with the ancient city. Its streets no longer radiate from a centre towards all the points of the compass, as they did of yore. The Appian Road, which on first leaving the city passes through a curious avenue of tombs, is typical of the old roads, constructed in straight lines, and shortening distances. It is true that these ancient highways have been superseded by railways, but they are still few in number, and Rome is not situated on a trunk line. Elsewhere railways were built from the capital of the country towards its periphery; in Italy, on the contrary, it was Florence, Bologna, and Naples which constructed lines converging upon Rome.

Rome is one of those large cities which are least able to exist upon their own resources, and having no port, and its immediate vicinity being rendered uninhabitable by miasmata, it has attached to it outlying places, and occupies a position similar to that of a spider in the centre of its web. Its gardens, its rural retreats, and its industrial establishments are all in the hill towns of Tivoli; at Frascati (near which are the ruins of Tusculum); at Marino (where the confederated nations of Latium held their meetings); at Albano (joined by a magnificent viaduct to Ariccia); at Velletri (the old city of the Volsci); at Palestrina (more ancient than either Alba Longa or Rome, and occupying the site of a famous temple of Fortune, the pride of ancient Prænestе). Its watering-places are at Palo, Fiumicino, and Porto d'Anzio, which adjoins the little town of Nettune, so famous because of the

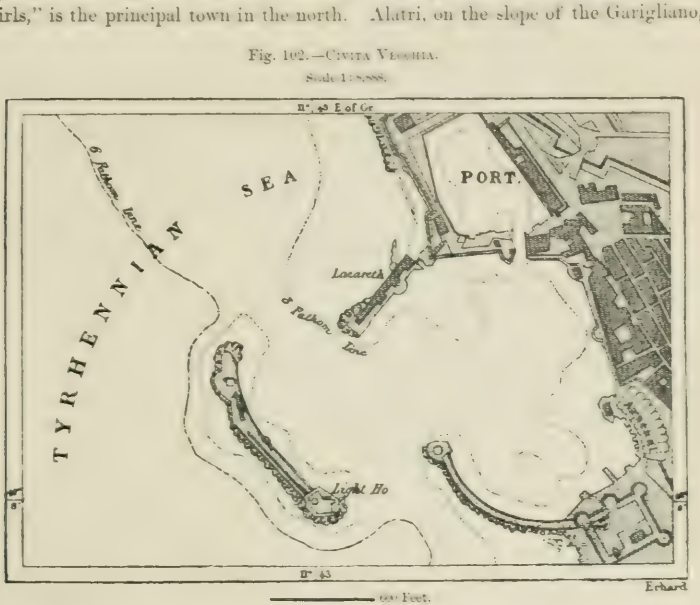
* Water supply of some leading cities (in gallons):—

	Per Second.	Per Day.	Per Inhabitant.
Rome (1869)	481	41,580,000	208
Paris (1875)	904	78,100,000	44
London (1874)	1,262	110,000,000	27·5
Glasgow (1874)	373	32,482,500	52
Washington (1870)	741	66,000,000	660

haughty beauty of its women. Its only seaport is Civita Vecchia, a dreary town on the Tyrrhenian Sea, with a magnificent harbour.* The ancient harbours to the south of the Tiber are very little resorted to in our day. Terracina, hidden amidst verdure at the foot of white cliffs, is only used by Rome-bound travellers coming by the coast road from the south.† Nearly every other town of Latium is built on one or other of the two great roads, of which one leads northward to Florence, whilst the other penetrates the valley of the Sacco towards the south-east, and finally issues upon the campagna of Naples. Viterbo, the "city of nice fountains and pretty girls," is the principal town in the north. Alatri, on the slope of the Garigliano,

Fig. 102.—Civita Vecchia.

Scale 1 : 8,888.



and commanded by a superb necropolis enclosed by cyclopean walls, occupies a similar position in the south. In the east, in one of the most charming valleys of Sabina, traversed by the ever-cool waters of the Anio, lies Subiaco, the ancient Sublaqueum, thus named after the three reservoirs constructed by Nero, who used to fish trout in them with a golden net. It was in a holy cave (*sacro speco*) near Subiaco that Benedict established his famous monastery, which preceded the still more famous monastery of Monte Casino, and conjointly with that of Lérins, in Provence, became the cradle of monachism in the West.‡

* Value of exports and imports, 1863, £1,348,000; 1868, 999,600.

† Tonnage of vessels which entered and cleared at the ports of Latium in 1873:—Civita Vecchia 520,000 (1875, 600,351); Fiumicino, 63,000; Porto d'Anzio, 30,000; Terracina, 335,000 tons.

‡ Towns of Latium (1871):—Rome, 229,356 (1876, 264,289); Viterbo, 16,326; Velletri, 14,798; Civita Vecchia, 10,484; Ferentino, 8,360; Tivoli, 7,730; Frosinone, 7,714; Subiaco, 6,990; Sezze, 6,650; Alatri, 6,396 inhabitants.

Perugia, the capital of Umbria, on the road from Rome to Ancona, is one of the ancient cities of the Etruscans, and excavations carried on in its vicinity have revealed tombs of the highest interest. After every war and disaster this city has arisen from its ruins, for its position in the midst of a fertile plain, and at the point of junction of several natural high-roads, is most favourable. It is both a Roman and a Tuscan city, and at the period of the Renaissance it gave birth to one of the great schools of painting. There still remain numerous monuments at Perugia which date back to that famous epoch, and although no longer one of the artistic head-quarters of Italy, it is still the seat of a university; its trade, especially in raw silk, is active; and its clean houses and streets, its pure atmosphere, and charming inhabitants annually attract to it a large number of the foreigners who spend the winter at Rome. Perugia has by far outstripped its rival, Foligno, which was formerly the great commercial mart of Central Italy, and still carries on a few branches of industry; amongst others, the tanning of leather. As to Assisi, it is justly famous because of its temple of Minerva, and its gorgeous monasteries decorated with the frescoes of Cimabue and his successor, Giotto, the last of the Greek and the first of the Italian painters. Assisi is only a small place now, but its environs are fertile and densely inhabited. It gave birth to Francesco d'Assisi, the founder of the order of St. Francis.

Other towns of Umbria, though not now of much importance, may boast of having once played a great part in history, or of possessing beautiful monuments. Spoleto, the gates of which Hannibal sought in vain to force, has a superb basilica, a Roman viaduct carried across a deep ravine, and mountains clad with pines and chestnuts. Terni is proud of its famous cascade (see p. 270). Orvieto, to the north of the Tiber, near the frontier of Tuscany, is haughty and dirty, but justly famous on account of its marvellous cathedral, one of the most costly and tasteful buildings in the world. Citta di Castello, on the Upper Tiber, and Gubbio, in the very heart of the mountains, are the two principal towns in the Umbrian Apennines. Both are delightfully situated, and possess efficacious mineral springs. At Gubbio are shown the famous "Eugubian Tables," seven plates of bronze covered with Umbrian characters, and the only relics of that kind known to exist. The little town of Fratta, now known as Umbertide, half-way between Perugia and Citta di Castello, is only of local importance.*

Ancona is the Adriatic port of the Roman countries. It is an ancient city of the Dorians, which still retains the name given it by its founders, on account of its being situated at the "angle" formed by the coast between the Gulf of Venice and the Southern Adriatic. A fine triumphal arch near the mole attests the importance which Trajan attached to the possession of this port. Thanks to its favourable position and the labour bestowed upon the improvement of its harbour, Ancona is one of the three great places of commerce on the Adriatic; it ranks next to Venice, and is almost the equal of Brindisi, though not one of the stages on the road to India. Its commerce is fed by Rome, the Marches, and Lombardy; and

* Population of the principal towns of Umbria (1871):—Perugia, 16,708; Rieti, 12,905; Terni, 12,419; Foligno, 8,471; Spoleto, 7,490; Orvieto, 7,423; Citta di Castello, 6,588; Assisi, 6,225; Gubbio, 5,343.

amongst its exports are fruits, oil, asphalt from the Abruzzos, sulphur from the Apennines, and silk, "the very best in the world," if the native estimate of its quality can be accepted.* The other ports along this coast offer but little shelter, and their commerce is small. Pesaro, the native town of Rossini, is only visited by vessels of twenty or thirty tons. Fano merely admits barges. The small river port of Sinigaglia (Senigallia) was formerly much frequented during the fair, at which commodities valued at £1,000,000 sterling used to change hands, but since its abolition in 1870 it has been deserted.

With the exception of Fabbriano, which occupies a smiling valley of the

Fig. 103.—Valleys of Erosion on the Western Slope of the Apennines.
Scale 1 : 1[illegible],000.

Apennines, and of Ascoli-Piceno, on the river Tronto, the inland towns of the Marches are built upon the summit of hills, but extend through their suburbs to the cultivable plains. The principal amongst them are Urbino, whose greatest glory consists in having been the birthplace of Raffael, and which, like its neighbour Pesaro, formerly produced a kind of faience much valued by connoisseurs; Jesi; Osimo; Macerata; Recanati, the native place of Leopardi; and Fermo. One of the most famous of these hill towns is Loreto, formerly the most-frequented place of pilgrimage in the Christian world. Before the Reformation, and at a time when

* Tonnage of vessels which entered and cleared from Ancona in the coast and foriegn trade: 258,292 tons in 1858, 372,877 tons in 1867, 751,089 tons in 1875.

travelling was far more difficult than now, as many as 200,000 devotees visited the shrines of Loreto every year. They were shown there the veritable house in which the Virgin Mary was born, and which was carried by angels to the spot it now occupies, and where it is sheltered by a magnificently decorated dome. At Castelfidardo, close by, was fought the battle which cost the Pope the greater part of the "patrimony of St. Peter."

There are only a few towns in the uplands of the Abruzzos. The principal of these is Aquila, founded in the thirteenth century by the Emperor Frederick II. The other towns are difficult of access, and, far from attracting inhabitants from beyond, they send their vigorous sons to the lowlands, where they are known as *Aquilani*, and highly appreciated as terrace gardeners. The most populous places are met with in the lower valley of the Aterno, or command the road leading to the coast and the fertile fields of the Adriatic slope. Solmona is embedded in a huge garden, anciently a lake, and overlooked in the south by the steep scarps of Monte Majella. Popoli, at the mouth of a defile, where the Aterno assumes the name of Pescara, is one of the busiest places between the sea and the uplands. Chieti, lower down on the same river, is said to have been the first town in the old Neapolitan province to introduce steam into its spinning-mills and other factories. Teramo and Lanciano are likewise places of some importance, but the only ports along the coast, Ortona and Vasto, are merely frequented by small coasting vessels.*

A small district in the Marches, joined to the coast by a single road, has maintained its independence through ages. Monte Titano, which rises in one of the most beautiful parts of the Apennines, and the base of which has been used as a quarry since time immemorial, bears upon its summit the old and famous city of San Marino. From its turreted walls the citizens can see the sun rise above the Illyrian Alps. San Marino, with some neighbouring hamlets, constitutes a "most illustrious" republic, and is now the only independent municipality of Italy. Named after a Dalmatian mason who lived as a hermit on Monte Titano, San Marino has existed as a sovereign state from the fourth century, its citizens having at all times known how to turn to advantage the jealousies of their neighbours. The constitution of this republic, however, is anything but democratic. The citizens, even though they be landed proprietors, have no votes, and are at most permitted to remonstrate. The supreme power is vested in a Council of sixty members, composed of nobles, citizens, and landowners. The title of councillor is hereditary in the family, and when a family becomes extinct the remaining fifty-nine choose another. The Council appoints the various officials, including a captain for the town and one for the country. San Marino has its little army, its budget, and its monopolies. A portion of its income is derived from the sale of titles and of decorations, and on the payment of £1,400 it has even created dukes, who take rank with the highest nobility of the kingdom. Taxation is voluntary. When the public chest is empty a drummer is sent round the town to invite contribu-

* Towns of the Marches having over 10,000 inhabitants:—Ancona, 35,111; Jesi, 13,472; Sinigaglia, 11,173; Ascoli-Piceno, 11,373; Fermo, 15,862; Macerata, 11,194; Pesaro, 12,375; Urbino, 10,194.

Abruzzos:—Lanciano, 15,432; Chieti, 14,321; Aquila, 13,513; Campobasso, 13,345; Solmona, 12,583; Vasto, 10,093.

tions. Though perfectly independent, this republic accepts a subsidy from Italy, and claims the special protection of the King. Its criminals are shut up in an Italian prison, its public documents are printed in Italy, and an Italian judge occupies the bench of the republican prætorium. There is no printing-office in the

Fig. 104.—Rimini and San Marino.

Scale 1 : 250,000.

little state, for the Council is afraid that books objectionable to the surrounding kingdom might be issued from it.*

* Area of San Marino, 21 square miles; population (1874), 7,816.

VI.—Southern Italy, Naples.

Amongst the various states which have been welded into the modern kingdom of Italy, Naples, though second to others in population and industry, occupies the largest area.* It embraces the whole southern half of the peninsula, and its coast has a development of 995 miles. Formerly the country was better known than any other portion of Italy as Magna Græcia, but now many parts of it are scarcely known at all.

The Apennines of Naples can hardly be described as a mountain chain. They consist rather of distinct mountain groups joined by transverse ranges, or by elevated saddles. In the first of these groups the serrated crest of the Meta (7,364 feet) rises above the zone of trees, and is separated from the Abruzzos by the deep valley of the Sangro, which flows to the Adriatic. Farther to the south, beyond the valley of Isernia, which gives birth to the Volturno, rise the mountains of the Matese, culminating in the Miletto (6,717 feet), the last bulwark of the Samnites. Other summits, less elevated, but equally steep and imposing, rise near Benevento and Avellino. They abound in savage defiles, in which many a bloody battle has been fought. The valley of the "Furcæ Caudinæ," where the Romans humbled themselves before the Samnites, and made promises which they never meant to keep, may still be recognised on the road from Naples to Benevento. The memory of this event lives in the Caudarola Road, and the village of Forchia d'Arpaia. This mountain region, which might fitly be called after its ancient inhabitants, is connected in the south with a transversal chain, running east and west, and terminating in Cape Campanello, to the south of the Bay of Naples. The beautiful island of Capri, with its white cliffs and caverns flooded by the azure waters of the Mediterranean, lies off this cape.

The eastern slope of the cretaceous mountains of Naples is gentle, and gradually merges in argillous *tavoglieri*, or table-lands, deposited during the Pliocene epoch. The *tavogliere de la Puglia* is, perhaps, the most sterile and dreary portion of Italy. It is cut up into terraces by deep ravines, through which insignificant streams find their way to the Adriatic, and the centres of population must be looked for at the mouths of valleys or along the high-roads. The country itself is a vast solitude, deserted by all except nomad herdsmen. There are no shrubs, and a kind of fennel, which forms the hedges separating the pasturing grounds, is the largest plant to be seen. Hovels, resembling tombs or heaps of stone, rise here and there in the midst of these plains. Fortunately the old feudal customs which prevented the cultivation of these plains, and compelled the mountaineers to keep open wide paths, or *tratturi*, through their fields for the passage of sheep, have been abolished, and the aspect of the tavogliere improves from year to year.

These tavoglieri completely separate the mountains of the peninsula of Gargano —the "spur" of the Italian "boot"—from the system of the Apennines. The northern slopes of these rugged mountains are still clad with forests of beeches

* Area, exclusive of the Abruzzos, 28,002 square miles; population, 6,251,750.

and pines, which supply the best pitch of Italy, and by thickets of carob-trees and other plants, whose flowers are transformed by the bees into delicious honey: but the very name of the most elevated summit—Monte Calvo (5,150 feet), or "bald mountain"—proves that the deplorable destruction of forests has been going on here as in the rest of the peninsula. In former times the recesses of Monte Gargano were held by Saracen pirates, and they defied the Christians there for a long time, in spite of the many sanctuaries which had been substituted for the ancient heathen temples. The most famous of these was the church on Monte Sant' Angelo, at the back of Manfredonia, which was frequently resorted to by the navigator about to leave the shelter of the bay for the dangerous coasts of Dalmatia or the open sea.

Fig. 105.—Monte Gargano.

Scale 1:850,000.

The Neapolitan Apennines terminate in the south with the ancient volcano of Monte Vultur (4,356 feet). Farther south the country gradually sinks down into a table-land intersected by deep ravines, which discharge their waters in three directions—towards the Bay of Salerno, the Bay of Taranto, and the Adriatic. The Apennines, far from bifurcating, as shown on old maps, are cut in two by the low saddle of Potenza, and on the peninsula forming the "heel" of Italy only low ridges and terraces are met with.

The peninsula of Calabria, however, is rugged and mountainous. The Apennines, near Lagonegro, again rise above the zone of forests. Monte Polino (7,656 feet) is the highest summit in Naples. The group of which it forms the

centre occupies the entire width of the peninsula, and along its western coast it forms a wall of cliffs even less accessible than those of Liguria. Towards the south it opens out into wooded valleys, where the inhabitants collect manna, an esteemed medicinal drug. The deep valley of the Crati separates these mountains from the Sila (5,863 feet), which is composed of granites and schists, and still retains its ancient forests, haunted by brigands. The shepherds who pasture their flocks in the clearings of these woods are said to be the descendants of the Saracens, who formerly occupied this "Country of Rosin," by which name it was known to the Greeks.

To the south of the isolated Sila the peninsula narrows to a neck of small elevation, where raised beaches attest the successive retreats of the sea. A third mountain mass, of crystalline formation, rises to the south of this depression, its furrowed slopes clad in forests. This is the Aspromonte (6,263 feet), or "rugged mountain." One of its spurs forms the palm-clad promontory of Spartivento, or "parting of the winds."

Naples, like Latium, has its volcanic mountains, which form two irregular ranges, one on the continent, the other in the Tyrrhenian Sea, and are, perhaps, connected beneath the sea with the volcanic mountains of the Liparic Islands and Mount Etna. One of these is Mount Vesuvius, the most famous volcano of the world, not because of its height or the terror of its eruptions, but because its history is that of an entire population who have made its lavas their home.

Scarcely have we left the defile of Gaeta and entered upon the paradisiacal Terra di Lavoro than we come upon the first volcano, the Rocca Monfina (3,300 feet), which rises between two calcareous mountains, one of which is the Massico, whose wines have been sung by Horace. No eruption of this volcano is on record, and a village now occupies its shattered crater. To judge from the streams of lava which surround its trachytic cone, its eruptions must have been formidable. The entire Campania is covered to an unascertained depth with ashes ejected from it, and the marine shells found in them prove that the whole of this region must have been upheaved at a comparatively recent epoch.

The hills which rise to the south of the Campania cannot boast of the grandeur of the Rocca Monfina, but they have been looked upon from the most remote times as one of the great curiosities of our earth. Standing upon the commanding height of the Camaldoli (518 feet), the Phlegrean Fields lie at our feet. Acquainted as we now are with the far more formidable volcanoes of Java and the Andes, this verdant sea-bound country may not strike us as a region of horrors. But our Greco-Roman predecessors looked upon it with very different eyes, and being unable to account for the phenomena they witnessed, they ascribed them to the gods. The quaking soil, the flames bursting forth from hidden furnaces, the gaping funnels communicating with unexplored caverns, lakes which disappeared at irregular intervals, and others exhaling deadly gases—all these things left their impress upon ancient mythology and poetry. At the time of Strabo the shores of the Bay of Baiæ had become the favourite resort of

THE BAY

Engr by Erhard

Depths to 30 ft

30 to 330 ft

330 to 1600 ft

Scal

F NAPLES

Marano
S. Anastasia
Somma
Ponticelli
Pollena
Massa di Somma
Ottajano
Barra
Mt. Somma
NAPLES
Portici
Resina
VESUVIUS
Torre del Greco
Bosco Reale
Bosco tre Case
Torre dell' Annunziata
B A Y
O F
A P L E S
CASTELLAMMARE di Stabia
Gragnano
Vico Equense
Mt. St. Angelo
Meta
Positano
Praiano
Massa Lubrense
Punta della Campanella
CAPRI
Ana Capri
Drawn by A. Vuillemin after French, Charts and the Neapolitan Staff Map.
10 Stat. Miles

voluptuaries, and sumptuous villas rose upon every promontory; but the terrors inspired by hidden flames and mysterious caverns had not yet departed. A dreaded oracle was said to have its seat there, guarded by Cimmerians, to whom strangers desirous of consulting the gods had to apply. These troglodytæ were doomed never to behold the sun, and only quitted their caverns during the night.

Fig. 106.—The Ashes of the Campania.
According to Carl Vogt. Scale 1:850,000.

The Phlegrean Fields were likewise supposed to have been the battle-ground of giants struggling for the possession of the fertile plains of the Campania. During the Middle Ages Pozzuoli was looked upon as the spot from which Christ descended into hell.

The number of craters still distinguishable is twenty. If we were to suppose

the country to be deprived of its vegetation, its aspect would resemble that of the surface of the moon. Even the city of Naples occupies an ancient crater, the contours of which have become almost obliterated. To the west of it several old craters can still be traced, one of them occupying a promontory of tufa, surmounted by what is called the tomb of Virgil. Passing through the famous grotto of Posilipo, we find ourselves in the Phlegrean Fields. On our left rises the small conical island of Nisita, its ancient crater invaded by the sea. Farther on we reach the crater known as the Solfatara, the Forum Vulcani of the ancients. Its last eruption took place in 1198, but it still exhales sulphuretted hydrogen. The Park of Astroni lies to the north. The interior slope of its enclosing wall is exceedingly steep, so as to render impossible the escape of the deer and boars which are kept within. The only access is through an artificial breach. Another crater, less regular in shape, is now filled with the bubbling waters of the Lake of Agnano. Near it is the famous Grotto of Dogs, with its spring of carbonic acid. Other springs of gas and sulphurous water rise in the neighbourhood, and to them Pozzuoli is indebted for its name, which is said to mean the "town of stinks." The town, in turn, has given its name to the earth known as pozzuolana, which supplies an excellent material for the manufacture of cement.

The coast of Pozzuoli has undergone repeated upheavals and subsidences, in proof of which the three columns of the temple of Serapis are usually referred to. At a time anterior to the Romans this temple, together with the beach upon which it stands, sank beneath the waters of the sea, and its columns must have been exposed to their action for many years, perhaps centuries, for up to a height of twenty feet they are covered with tubes of serpulæ, and perforated by innumerable holes bored by pholadidæ. In the course of time it rose again slowly above the waters. This happened, perhaps, in 1538, when the Monte Nuovo sprang into existence. In the short period of four days this new volcano, 490 feet in height, rose above the surrounding plain, and buried the village of Tripergola beneath its ashes. A beach now known as La Starza was formed at the foot of the cliffs, and two sheets of water to the west of Monte Nuovo were cut off from the sea. One of these, the Lago Lucrino, is famous for its oysters; the other is the Lago d'Averno, which Virgil, in conformity with antique legends, described as the entrance to the infernal regions. It occupies an ancient crater, and its pellucid waters abound in fish. There are no exhalations of poisonous gases now, and birds fly over the lake with impunity. Still its vicinity is haunted by the memories of the old pagan mythology. Lake Fusaro is referred to by the ciceroni as the Acheron; close to it they point out the den of Cerberus; the sluggish stream of Acqua Morta has been identified with the Cocytus; Lake Lucrino, or rather a spring near it, with the Styx; and the remains of a subterranean passage which connected the Averno with the sea are pointed out as the whilom grotto of the Sibyl. The inhabitants of Cumæ, which was founded by a colony from Chalcis, and the ruins of which still exist on the Mediterranean coast, to the east of Pozzuoli, brought with them the myths of Hellas, and Grecian poetry, which took possession of them, has kept their memory alive.

It is quite proper that this region of Tartarus should have its contrast in Elysian

Fields, and this name has actually been bestowed upon a portion of the peninsula of Baiæ, which formed the chief attraction of the voluptuous Romans, and where Marius, Pompey, Cæsar, Augustus, Tiberius, Claudius, Agrippina, Nero, and others had their palaces. Many a fearful tragedy has been enacted in these sumptuous buildings. But hardly a trace of them exists now; nature has resumed possession of the country, and the hills of tufa and volcanoes are the only curiosities of the peninsula. Cape Miseno is one of these old volcanoes, and from its summit may be enjoyed one of the most delightful prospects in the world. The whole of the Bay of Naples—"a bit of heaven fallen upon our earth"—lies spread out beneath us, and Ischia the joyous, formidable Capri, the promontory of Sorrento, Mount Vesuvius, and the houses and villas of Naples fill up the space bounded by the sea and the distant Apennines.

The island of Procida joins the Phlegrean Fields to the chain of island volcanoes lying off the Bay of Gaeta. Ischia is the most important of these, and its volcano, the Epomeo (2,520 feet), almost rivals Mount Vesuvius in height. One of its most formidable eruptions occurred in 1302, at a time when Mount Vesuvius was quiescent, but after the latter resumed its activity Ischia remained in repose. Similarly, when the Monte Nuovo was ejected from the earth, the huge volcano went to sleep for no less a period than one hundred and thirty years. Ischia has known no eruption for five centuries and a half, and the gases escaping from its thirty or forty hot springs are now the only signs of volcanic activity.

Ischia has certainly been upheaved during a comparatively recent epoch, for its trachytic lavas rest in many places upon clays and marls containing marine shells of living Mediterranean species. Some of these have been found at a height of nearly 2,000 feet. At the present time the tufa rocks of Ischia, and of the other volcanic islands to the west of it, are being washed away by the sea. Ventotene, the ancient Pandataria, to which the Roman princesses were exiled, is hardly more now than a heap of scoriæ. Ponza, likewise a place of exile of the Romans, has been separated by the erosive action of the sea into a number of smaller islands. Its lavas overlie Jurassic rocks, similar in all respects to those of Monte Circello on the coast nearest to it.

Mount Vesuvius (4,100 feet), the pride and dread of the Neapolitans, was likewise an island during prehistoric times. The marine shells found in the tufa of Monte Somma prove this, and on the east the volcano is still surrounded by plains but little elevated above the sea. Formerly the mountain was covered with verdure to its very summit, but the explosion of A.D. 79 shattered its cone, and the ashes thrown up into the air shrouded the whole of the country in darkness. Even at Rome the sun was hidden, and an age of darkness was believed to have set in. When at length the light reappeared, the face of the country was found to have undergone a marvellous change. The mountain had lost its shape, the fertile fields were hidden by masses of débris, and entire towns had been buried beneath ashes.

Since that terrible event Mount Vesuvius has vomited lavas and ashes on many occasions. No periodicity has been traced in these outbursts, and the intervals

of repose were generally of sufficient duration to enable vegetation to resume its sway. But these eruptions have become more frequent since the seventeenth century, and hardly a decade passes by without one or more of them. Each of them modifies the contours of the mountain, whose great central vent has undergone many changes. The crescent-shaped mass of débris which surrounds the old crater, known as the Atrio del Cavallo, was undoubtedly of loftier height previously to the great outburst of 79 than it is now. The vicinity of Naples has facilitated a study of the phenomena attending volcanic eruptions, and an observatory, permanently occupied, has been built close to the cone of eruption.

The neighbourhood of Mount Vesuvius, like that of all other volcanoes, abounds in hot and gas springs, but there are no subsidiary craters. The nearest volcano

Fig. 107.—Eruption of Mount Vesuvius, April 26th, 1872.

is Monte Vultur (4,356 feet), a regular cone on the eastern slope of the peninsula. Its dimensions are larger than those of Vesuvius, but no eruptions are on record, though a slight escape of carbonic acid is still going on from the two lakes which occupy the bottom of its vast crater. On a line connecting Ischia, Vesuvius, and Monte Vultur, and about half-way between the two latter, we meet with the most abundant carbonic acid spring of Italy. The gas escapes with a hissing noise from the pond of Ansanto, and the ground around the spring is covered with the remains of insects, killed in myriads on coming within the influence of the poisonous air. Near it the Romans erected a temple in honour of Juno the Mephitic.

The disasters resulting from volcanic eruptions are great, no doubt, but they

are exceeded by those caused by earthquakes. Some of these are unquestionably caused by a subterranean displacement of lava, and thus, when Vesuvius begins to stir, Torre del Greco and other towns at its foot incur the risk of being buried beneath ashes or destroyed by earthquakes. But the Basilicata and Calabria—that is to say, the two provinces lying between the volcanic foci of Vesuvius and Etna—have many times been shaken by earthquakes whose origin cannot be traced to volcanic agencies. Out of a thousand earthquakes recorded in Southern Italy during the last three centuries, nearly all occurred in the provinces named, and they were occasionally attended by the most disastrous results. The earthquake of 1857 cost the lives of 10,000 persons at Potenza and its vicinity, but the most disastrous of these events happened in 1785 in Southern Calabria. The first shock, which proceeded from a focus beneath the town of Oppido, in the Aspromonte Mountains, only lasted a hundred seconds, but within that short space of time 109 towns and villages were overthrown, and 32,000 of their inhabitants buried beneath their ruins. Crevasses opened in the ground; rivers were swallowed up, to reappear again lower down as lakes; liquid clay flowed down the hill-slopes like lava, converting fertile fields into unproductive wastes. The commotion of the sea added to these horrors. Many of the inhabitants of Scilla, afraid to remain on the quaking land, fled to their boats, when an enormous mass of rock detached itself from a neighbouring mountain, and, tumbling into the sea, produced a wave which upset the boats and cast their fragments upon the shore. Want of food brought on famine, and typhus, as usual, came in its train.

We are not yet able to predict earthquakes, and can only provide against them by a suitable construction of our dwellings. There exists, however, another cause of misery and depopulation which the Neapolitans might successfully combat, as was done by their ancestors. In the time of the Greeks the swamps along the coast were certainly less extensive than they are now. War, and a return towards barbarism, have caused the rivers to be neglected, and to produce a deterioration in the climate. Baia, a place once famous on account of its healthiness, has become the home of malaria. Sybaris, the town of luxury and pleasure, has been supplanted by a fever-plain "which eats more men than it is able to nourish." These paludial miasmata, poverty, and ignorance decimate the population of the Puglia, Basilicata, and Calabria. Even certain Asiatic diseases, such as elephantiasis and leprosy, ravage the country, which, from its rare fertility and fine climate, ought to be in the enjoyment of the greatest prosperity.

Continental Sicily is indeed a favoured region, and its eastern slopes more especially might be converted into one huge garden, for the rainfall there is abundant. Naples enjoys a semi-tropical climate, and its winter temperature is hardly inferior to the annual mean of London. Snow very rarely falls, and only remains on the tops of the hills for a few weeks.* The vegetation along the coast is of tropical luxuriance. Oranges and lemons bear excellent fruit; date-palms uplift their fan-shaped leaves, and sometimes bear fruit; the American agave

* Mean annual temperature of Naples, 62° F.; extremes, 25° and 101°; rainfall, 37 inches.

stretches forth its candelabra-like branches; sugar-cane, cotton, and other industrial plants, which elsewhere in Europe are scarcely ever met with outside hothouses, grow in the fields. In the forests of Calabria the olive-tree affords as much shade as does the beech with us. Even the bare rocks on the coast yield excellent grapes and garden fruits. Naples, Sicily, Andalusia, and certain districts of Greece and Asia Minor realise our beau idéal of the sub-tropical zone, and only the heaths on the Adriatic slope and the upper valleys of the Apennines remind us that we are still in Central Europe.

This delightful country is inhabited by a people having the most diverse origin. It is now 2,300 years since the Samnites occupied the whole of it from sea to sea. They were more numerous than the Romans, and might have conquered the whole of Italy had there been more cohesion amongst them, and some of that talent for organization which constituted the strength of their adversaries. But they were split into five tribes, each speaking a different dialect; and whilst the Samnites of the hills quarrelled with their kinsmen in the plains, the latter were at enmity with the Hellenized Samnites who lived near the Greek towns on the coast.

The whole of the coast of Southern Italy, from Cumæ—founded more than a thousand years before our era—to Sipuntum, of which some ruins remain near the modern Manfredonia, was dotted with Greek colonies. In these districts of Southern Italy the bulk of the population is of very different origin from that of other parts of the peninsula. To the north of Monte Gargano, Celtic, Etruscan, and Latin elements preponderate, whilst Hellenes, Pelasgians, and kindred races dominate in the south. Not only did civilised Greeks found their colonies there, but the aboriginal population, the Iapygians, spoke a dialect akin to the Hellenic, and Mommsen may be right when he conjectures that these Iapygians were of the same origin as the modern Albanians.

At a subsequent date these southern Italians had to bow down before the Romans, who founded military colonies amongst them, but never succeeded in completely Latinising them. When the Roman Empire fell to pieces the Cæsars of Byzantium still maintained themselves for a long time in Southern Italy, and the Greek language again preponderated, but gradually Romance dialects gained the upper hand. The inhabitants returned to a state of barbarism, but they retained to a great extent their language and customs, and even now there are districts in the south which are Italian in appearance rather than in reality, and in eight villages of the Terra d'Otranto the Hellenic dialect of the Peloponnesus is still spoken. Towns like Naples, Nicastro, Taranto, Gallipoli, Monopoli, and others, whilst preserving their sonorous Greek names, have also retained many features which recall the times of Magna Græcia.

Reggio—that is, the "city of the strait"—appears to have retained the use of Greek much longer than any other town, and its patricians, who boasted of being pure Ionians, still spoke the language of their ancestors towards the close of the thirteenth century. In several remote towns of the interior Greek was formerly in common use. The old popular songs of Bova, a small town near the southern

extremity of Italy, are in an Ionian dialect more like the language of Xenophon than is modern Greek. Down to a very recent date the peasants near Roccaforte del Greco, Condofuri, and Cardeto spoke Greek, and when they appeared before a magistrate they required an interpreter. At the present day all young people speak Italian; the old language has been forgotten, but the Greek type remains. The men and women of Cardeto are famous for their beauty, more especially the latter. "They are Minervas," we are told by a local historian. Their principal livelihood consists in acting as wet nurses to the children of the citizens of Reggio. The women of Bagnara, between Scilla and Palmi, are likewise of wondrous beauty, but their features are stern, betraying Arab blood, and they are destitute of the noble placidity of the Greek.

It is said that the women of the Hellenic villages of Calabria are still in the habit of executing a sacred dance, which lasts for hours, and resembles the representations we meet with on ancient vases, only they dance before the church instead of the temple, and their ceremonies are blessed by Christian priests. Funerals are accompanied by weeping women, who collect their tears in lachrymatories. Elsewhere, as in the environs of Taranto, the children consecrate the hair of their head to the manes of their ancestors. Old morals, no less than old customs, have been preserved. Woman is still looked upon as an inferior being, and even at Reggio the wives of citizens or noblemen who respect ancient tradition confine themselves to the gynæceum. They do not visit the theatre, go out but rarely, and when they walk abroad are attended by barefooted servants, and not by their husbands.

In addition to Samnites, Iapygians, and Greeks, who form the bulk of the population of Southern Italy, we meet with Etruscans in the Campania; Saracens in the peninsula of Gargano, in the Campania, the marina of Reggio, Bagnara, and other coast towns; Lombards in Benevento, who retained their language down to the eleventh century; Normans, from whom the shepherds on the hills are supposed to be descended; and Spaniards in several coast towns, especially at Barletta, in Apulia. The Albanians have probably furnished the largest contingent of all the strangers now domiciled in Southern Italy. They are numerous on the whole of the eastern slope of the peninsula, from the promontory of Gargano to the southernmost point of Calabria. One of their clans came to Italy in 1440, but the bulk of them only arrived during the second half of the fifteenth century, after the heroic resistance made by Scanderbeg had been overcome by the Turks. The conquered Skipetars were then compelled to expatriate themselves in order to escape the yoke of the Turks, and they were received with open arms by the Kings of Naples, who granted them several deserted villages, which are now amongst the most flourishing of Southern Italy. The descendants of these Skipetars, who are principally domiciled in the Basilicata and Calabria, rank among the most useful citizens of the country. They take the lead in the intellectual regeneration of the old kingdom of Naples, and were the first to join the liberating army of Garibaldi. Many have become Italianised, but there are still over 80,000 who have neither forgotten their origin nor their language.

The Neapolitans are undoubtedly one of the finest races of Europe. The Calabrians, the mountaineers of Moliso, and the peasants of the Basilicata are so well proportioned, erect, supple of limb, and agile, that their low stature, as compared with the races of the North, can hardly be a subject of reproach; and the nobility and expression of the faces of Neapolitan women fully compensate for the irregularity we frequently meet with. The faces of the children, with their large black eyes and well-formed lips, beam with intelligence, but the wretched existence to which too many of them are condemned soon degrades their physiognomy. Supremely ignorant, the Neapolitan is, nevertheless, most admirably gifted by nature. The country which has produced so many great men since the days of Pythagoras is in nowise inferior to any other; its philosophers, historians, and lawyers have exercised a powerful influence upon the march of human thought; and the number of great musicians which it has produced is proportionately large.

Still, in many respects, the inhabitants of Southern Italy hold the lowest rank amongst the nations of Europe. Ever since the annihilation of the Greek republican cities the country has been subjected to foreign masters, who have either devastated it or systematically oppressed its inhabitants. With the exception of Amalfi, no other town was granted the privilege of governing itself for any length of time. The very position of the country exposed it to dangers. Placed in the centre of the Mediterranean, it was on the high-road of every pirate or invader, whether Saracen or Norman, Spaniard or Frenchman, and the absence of any natural cohesion between its various districts prevented its population from organizing a united resistance against the attacks of foreign invaders. Southern Italy has not the river basins of Lombardy, Tuscany, Umbria, or Rome; there exists no centre of gravity, so to say, and the country is split up into separate sections having nothing in common.

The government under which the Neapolitans lived until quite recently was most humiliating. "I do not require my people to think," said King Ferdinand II. of Naples. Ideas which did not commend themselves to the authorities were punished as crimes, and only mendicity and moral depravity were allowed to flourish. Science was compelled to live in retirement; history to seek a refuge in the catacombs of archæology; and literature was corrupt or frivolous. Of the Neapolitans who did not expatriate themselves only a very small number became eminent. Schools were hardly known outside the large towns, and where they did exist they were placed under the supervision of the police. Men able to read and write were looked at askance, and, to escape being accused of belonging to some secret society, they were compelled to turn hypocrites. Old superstitions exist in full force, and the heathen hallucinations of Greeks and Iapygians still survive. The idolatrous Neapolitan casts himself down before the statue of St. Januarius, but heaps imprecations upon the head of his saint if his miraculous blood does not quickly liquefy. Similar superstitions exist in nearly every town of Naples. Every one of them has its patron saint or deity, who, if he should fail to protect his people, is treated as a common enemy. As recently as 1858 the villagers of Calabria, irritated by a drought, put their venerated saints into prison; and Barletta,

about the same period, had the melancholy honour of being the last town in Europe in which Protestants were burned alive. Such is the fanaticism still met with in the second half of the nineteenth century! *

Fig. 108.—Educational Map of Italy.

1.20 p.c.	30.50 p.c.	50.70 p.c.	[illegible] p.c.	[illegible] p.c.	90.100 p.c.
Switzerland, Doubs, Jura.	Ain, Isère, Basses and Hautes Alpes, Haute Savoie, Var, Styria, Carinthia, Hungary, Piemont.	Corsica, Alpes Maritimes, Liguria, Lombardy, Tuscany, Umbria.	Tyrol, Istria, Croatia, Emilia, Venetia, Marches, Campania, Sardinia.	Dalmatia, Carniola, Abruzzos, Apulia, Calabria, Sicily, Latium.	Bosnia, Africa, Basilicata.

* In 1868 69 per cent. of the men and 88 per cent. of the women married in the Campania, the most educated province of Naples, were not able to sign their names. In the Basilicata the proportions were 85 and 96 per cent.!

One of the great superstitions of the Neapolitans refers to the "evil eye." The unfortunate being who happens to have a nose like a battle-axe and large round eyes is looked upon as a *jettatore*, and is avoided as a fatal being. If by any evil chance his glance happens to fall upon any unfortunate person, it is considered necessary to counteract it by the influence of an amulet resembling the *fascinum* of the ancients, or by some other means no less potent. Coral amulets are looked upon as most efficient, and many who pretend not to believe in their virtues are the first to make use of them. The peasants of Calabria wear an image of their patron saint upon the chest, and shield their cattle and houses by means of the images of saints or household gods. At Reggio a cactus may be seen near the door or on the balcony of every house, which has been placed there to keep off evil influences, and is universally known as *l'albero del mal' occhio* (the tree of the evil eye).

Next to superstition, the great scourge of Southern Italy is brigandage. The very name of Calabria conjures up in our imagination picturesque brigands armed with carbines. Unfortunately this Calabrian brigand is no myth, invented to serve the purposes of the stage. He really exists, and neither the severity of the laws put in motion against him nor political changes have brought about his extermination. On many occasions, after a successful hunt for brigands had been carried on, the authorities felicitated the selves upon having rid the country of this scourge, but it regularly revived.

In Sardinia and Corsica the peasant takes up arms from a desire for vengeance, but in Calabria from poverty. Feudalism, though abolished in name, still flourishes in that country. Nearly the whole of the soil belongs to a few great landowners, and the peasant, or *cafore*, is condemned to a life of ill-remunerated toil. In years of plenty, when the rye, chestnuts, and wine suffice for the wants of his family, he works without grumbling, but in years of dearth brigandage flourishes. The brigand, or *guaduno*, looks upon the feudal lord as the common enemy, steals his cattle, sets fire to his house, and even takes him prisoner, releasing him only on payment of a heavy ransom. Some of these bandits become veritable wild beasts, thirsting after blood; but, as long as they confine themselves to avenging wrongs, they may count upon the complicity of all other peasants. The herdsmen of the mountains supply them with milk and food, furnish them with information, and mislead the carabiniers sent in pursuit of them. All the poor are leagued in their favour, and refuse to bear witness against them. Moreover, most of these Neapolitan bandits, conscientious in their own way, are extremely pious. They swear by the Virgin or some patron saint, to whom they promise a portion of their booty, and religiously place the share promised upon the altar. Not content with wearing amulets all over the body to turn aside bullets, they are said sometimes to place a consecrated wafer in an incision they make in their hand, in the belief that this will render deadly their own bullets.

The fearful poverty of the South Italian peasantry has led to another practice, even worse than brigandage. Foreign speculators, Christians as well as Jews, travel the country, and particularly the Basilicata, in order to purchase children, whom

their poverty-stricken parents are ready to part with for a trifle. The more intelligent and prettier the child, the greater the likelihood of its passing into the hands of these dealers in human flesh. The latter are threatened with the penalties of the law, but custom and ignoble accomplices enable them to evade them, and to carry their living merchandise to France, England, Germany, and even America, where the children are converted into acrobats, street musicians, or simple mendicants. The chances of this shameful commerce have been carefully calculated, and the losses arising from deaths and the cost of travelling are more than covered by the earnings of the children. Viggiano, a small town of the Basilicata, is more especially haunted by these traffickers, for its inhabitants possess a natural gift for music.

Voluntary emigration is on the increase, and if it were not for the obstructions placed in the way of young men liable to the conscription, certain districts would become rapidly depopulated in favour of South America. Only the poorest peasants remain behind. This emigration influences in a large measure the customs of the country, and, conjointly with railways and factories, will no doubt bring about an assimilation of Southern Italy to the rest of the peninsula. Brigandage and the traffic in children will doubtless disappear, but the proletarianism of manufacturing towns is likely to be substituted for them.

For the present Naples is almost exclusively an agricultural country. The Tavolieri of Puglia, and the hills which command them, remain for the most part a pastoral country, but the greater portion of the productive area of Naples is under cultivation. As in the time of the Romans, cereals, with oil and wine, form the principal produce; but, in addition to these, tobacco, cotton, madder, and several other plants used in manufactures, are grown. With some care these products might attain a rare degree of excellence. Even now the oil of the Puglia competes successfully with that of Nice, and the wines grown on the scoriæ of Mount Vesuvius enjoy their ancient celebrity, the Falernian of Horace, grown in the Phlegrean Fields, disputing the pre-eminence with the Lachrymæ Christi of Vesuvius and the white wine of Capri.

The agricultural products of Naples are almost exclusively derived from the coast region, and commerce is principally carried on in coasting vessels. The interior is sterile to a great extent, and there are no metalliferous veins to attract population.

Southern Italy has no natural centre, and, as its life has at all times been eccentric and maritime, it is but natural that all the large towns should have sprung up on the coast. Two thousand years ago, when Greece was a civilised country and Western Europe sunk in barbarism, the most important towns lay on the Ionian Sea facing the east. But, when Rome became the mistress of the world, Magna Græcia was forced to face about, and Naples became the successor of Sybaris and Tarentum. This position of vantage it has retained even to the present day, when Western Europe has become the focus of civilisation. The wave of history has passed over Tarentum and Sybaris, and whilst the fine port of the former is now deserted, the latter, at one time the largest city of all Italy, has entirely disappeared.

Naples, the "new town" of the Cumæans, has for centuries been the most populous town of Italy, and even now the number of its inhabitants is double that of Rome. In the days of Strabo Naples was a large town. Greeks who had made money by teaching or otherwise, and who desired to end their days in peaceful repose, used to retire to that beautiful town, where Greek manners predominated, and the climate resembled that of their native country. Many Romans followed this example, and Naples, together with the numerous smaller towns dotting the shores of its magnificent bay, thus became a place of repose and pleasure. At the present day it attracts men of leisure from every part of the world, who revel in its beauties and enjoy the noisy gaiety of its inhabitants—"masters in the art of shouting," as Alfieri called them. The prospect from the heights of Capodimonte and the other hills surrounding the immense city is full of beauty: promontories jut out into the blue waters, islands of the most varied colours are scattered over the bay, shining towns stretch along the foot of verdant hills, and vessels ride upon the waves. Looking inland, we behold the grey summit of Vesuvius, which, lurid at night, and always threatening, imparts a modicum of danger to the voluptuous picture.

The Neapolitans are indeed a happy people, if such a term may be applied to any fraction of mankind. They know how to enjoy the gifts of nature, and are content, if need be, with very little. Naturally intelligent, they are equal to any enterprise; but, as they hate work, they soon give up what they have begun, and make sport of their want of success. Travellers were formerly fond of describing that curious type, the *lazzarone*, the idle man of pleasure, who, enveloped in a rag, slept on the beach or in the porch of a church, and disdained to work after he had earned the pittance sufficing for his simple wants. There still remain a few representatives of this type, but the material exigencies of our time have absorbed the majority of these idle tatterdemalions, and converted them into labourers. Others have succumbed to disease, for they knew nothing of sanitary laws, and dwelt in damp cellars, or *bassi*, beneath the palaces of the wealthy. Naples contributes her fair share towards the industrial products of the peninsula. The principal articles manufactured are macaroni and other farinaceous pastes, cloth, silks known as *gros de Naples*, glass, china, musical instruments, artificial flowers, ornaments, and everything entering into the daily consumption of a large city. Its workers in coral are famous for their skill; and Sorrento, near Naples, supplies the much-prized workboxes, jewel cases, and other articles carved in palm-wood. The shipyards of Castellamare di Stabia are more busy than any others in Italy, those of Genoa and Spezia alone excepted. The sailors of the bay are equal to the Ligurians in seamanship, and surpass them as fishermen. The inhabitants of Torre del Greco, who engage in coral-fishing, are well acquainted with the submarine topography of the coasts of Sardinia, Sicily, and Barbary, and the least movement of the air or water reveals phenomena to them which remain hidden to all other eyes. They own about 400 fishing-boats, which depart in a body, and their return after a successful season presents a spectacle which even Italy but rarely affords.*

* In 1873 there were 363 fishing-boats, and 90,000 lbs. of coral, valued at £92,000, were obtained.

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Naples, with its magnificent bay, and the fertile tracts of the Campania and the Terra di Lavoro near it, could hardly fail to become a great commercial city, and if it holds an inferior rank in that respect to Genoa, this is owing to its not being placed upon a great high-road of international commerce. The country depending upon it is of comparatively small extent: only a single line of rails

Fig. 1[illegible].—Pompeii.

From the Neapolitan Staff Map. Scale 1 : [illegible].

Miles.

crosses the Apennines; and travellers who follow the mountain road to Taranto are not, even now, quite safe from brigands. The foreign commerce of the city is carried on principally with England and France, and the coasting trade is comparatively of great importance.*

The university is one of the glories of Naples. Founded in the first half of

* In 1864 10,694 vessels, of 1,496,500 tons burden, entered and cleared the port of Naples; in 1875 11,288 vessels, of 2,923,922 tons.

the thirteenth century, it is one of the oldest of Italy, but has had its periods of disgraceful decay. Up to a recent period, when archæology and numismatics were the only sciences not suspected of revolutionary tendencies, it was a place of intellectual corruption, but its regeneration has been brought about with marvellous rapidity. The young Neapolitans now study science with a zest sharpened by abstinence; and, if the rather gushing eloquence of the South could be trusted, Naples has become the greatest seat of learning in the world. Thus much is certain, that the 2,000 students of the university will give a great impulse to the "march of ideas."

Naples possesses an admirable museum of antiquities, open to all the world, and, more precious still, the ruins of Pozzuoli, Baiæ, and Cumæ, and catacombs no less interesting than are those of Rome; and, above everything else, the Roman city of Pompeii, which has been excavated from the ashes of Mount Vesuvius, beneath which it lay buried for seventeen centuries. It is not merely a City of the Dead, with its streets and tombs, temples, markets, and amphitheatres, which these excavations have restored to us, but they have likewise given us an insight into the life of a provincial Roman city. When we gaze upon inscriptions on walls and waxed tablets, at work interrupted, at mummified corpses in the attitude of flight, we almost feel as if we had been present at the catastrophe which overwhelmed the town. No other buried city ever presented us with so striking a contrast between the tumult of life and the stillness of death. In spite of a hundred years of excavation, only one-half of the city has yet been revealed to us. Herculaneum is buried beneath a layer of lava sixty feet in thickness, upon which the houses of Resina, Portici, and other suburbs of Naples have been built, and but very few of its mysteries have been revealed to us. Of Stabiæ, which lies hidden beneath the town of Castellamare, close to the beach, we know hardly anything.

Numerous populous towns cluster around Naples, rivalling it in beauty. To the south, on the shores of the bay, are Portici, Resina, Torre del Greco, Torre dell' Annunziata, Castellamare, and sweet Sorrento, with its delicious climate, its delightful villas and olive groves. Off Cape Campanella, facing the volcanic islands of Ischia and Procida, at the other extremity of the bay, rise the bold cliffs of Capri, full of the memories of hideous Tiberius, the *Timberio* of the natives. Another bay opens to the south of that barren mass of limestone, its entrance guarded by the islets of the Sirens, who sought in vain to cast their spell over sage Ulysses. This bay is hardly inferior in beauty to that of Naples; its shores are equally fertile, but neither of the three cities, Pæstum, Amalfi, or Salerno, which successively gave a name to it, has retained its importance for any length of time. Amalfi, the powerful commercial republic of the Middle Ages, whose code was accepted by all maritime nations, is almost deserted now, and only shelters a few fishing-smacks within its rocky creek. In a delightful valley near it stands the old Moorish city of Ravello, almost as rich as Palermo in architectural monuments. Salerno is much more favourably situated than Amalfi, for the road of the Campania debouches upon it. The town is said to have been founded by a son of Noah, and when the Normans occupied the country in the eleventh century

CAPRI, SEEN FROM MASSA LUBRENSE.

they made it their capital. But its ancient splendours have gone. Its university, at one time the representative of Arab science, and the most famous in Europe for its medical faculty, has made no sign for ages, and Salerno has now no claim whatever to the title of "Hippocratic town." It aspires, however, to rise into importance through commerce and industry, and a breakwater and piers might convert it into a formidable rival of Naples. The inhabitants are fond of repeating a local proverb —

"When Salerno a port doth obtain
That of Naples will be inane."

Pæstum, or Posidonia, the ancient mistress of the bay, stood to the south-east of Salerno. It was founded by the Sybarites on the ruins of a more ancient town of the Tyrrhenians. The Roman poets sang this "city of roses" on account of its cool springs, shady walks, and mild climate. It was destroyed by the Saracens in 915, and its ruins, though amongst the most interesting of all Italy, dating as they do from a period anterior to that of Rome, were known only to shepherds and brigands up to the middle of last century. Its three temples, the most important of which was dedicated to Neptune, or Poseidon, are amongst the most imposing of continental Italy, their effect being heightened by the solitude which surrounds them and the waves which wash their foundations. The traveller, however, cannot afford to remain for any length of time within their vicinity, for the site of the ruins is surrounded by marshes, the exhalations from which sadly interfere with the excavations going on.

Numerous towns and villages are dotted over the champaign country separating Mount Vesuvius from the foot-hills of the Apennines. Starting from Vietri, a suburb of Salerno on the banks of a narrow ravine, we ascend to Cava, a favourite summer retreat, abounding in shade-trees. Near it is a monastery famous amongst antiquaries on account of its ancient parchments and diplomas. On descending to the plain of the Sarno we pass Nocera, a country residence of the ancient Romans; Pagani, still situated within the region of woods; Angri, which manufactures yarns from cotton grown in its environs; and Scafati, more industrious still. Near it may be seen the ruins of Pompeii, the town of Torre dell' Annunziata, and, on the southern slope of Vesuvius, the houses of Bosco Tre Case and Bosco Reale. There are savants who believe they can trace in the veins of the inhabitants of Nocera and the neighbourhood the Arab and Berber blood of the 20,000 Saracens who were settled here by the Emperor Frederick II.

The valley of the Sarno, above Nocera, is densely peopled as far as the foot of the Apennines, and another chain of villages extends northwards to the town of Avellino, the fields of which are enclosed by hedges of filbert-trees (*avellana* in Italian), and which is important on account of its intermediary position between the mountains and the plain. The population, however, is densest in that portion of the Campagna known as the "Happy" (Felice), which extends between Vesuvius and Monte Vergine. Sarno, named after the river, though far away from it, abounds in cereals, vines, fruit, and vegetables, and manufactures cotton stuffs and raw silk. Palma stands in the midst of fertile fields; Ottajano, the

town of Octavius, on the lower slope of the Somma of Vesuvius, is famous for its wines; Nola, where Augustus died, and which gave birth to Giordano Bruno, has fertile fields, but is better known through the fine Greek vases found in its ruins, and on account of the remains of an amphitheatre built of marble, and of greater size than that of Capua.

Famous Capua, the ancient metropolis of the Campania, at one time the rival of Rome, with half a million inhabitants dwelling within its walls, has been completely stripped of its former splendours. Its name is applied now to a sullen fortress on the Volturno, the *Casilinum* of the Romans; and Santa Maria, which is the representative of the veritable Capua, offers no "delights" other than those of a large village. In its environs, however, may still be seen the ruins of a fine amphitheatre, a triumphal arch, and other remains of a vast city. Caserta, the "town of pleasure" of the modern Campania, lies farther to the south. It boasts of a large palace, shady parks, and vast gardens ornamented with statues and fountains, and was the Versailles of the Neapolitan Bourbons. An aqueduct supplies it with water from a distance of twenty-five miles, and crosses the valley near Maddaloni by means of a magnificent bridge, built about the middle of last century by Vanvitelli, and one of the masterpieces of modern architecture.

The great Roman highway bifurcates to the north of Capua and the Volturno. One branch turns towards the coast; the other, along which a railway has been built, skirts the volcano of Rocca Monfina, follows the valley of the Garigliano and of its tributary the Sacco as far as the eastern foot of the volcano of Latium, and then descends into the Campagna of Rome. Historically the coast road is the more famous of the two. It first passes close to Sessa, the ancient city of the Aurunci, whose acropolis stood in the crater of the Rocca Monfina. It then turns towards the coast, and having crossed the Garigliano near its mouth, where it is bounded by insalubrious marshes, it penetrates the defile of Mola di Gaeta, officially called Formia, in memory of ancient Formiæ, where Cicero lived and died. Travellers coming from Rome first look down from this spot upon the beauties of the Campania, and see stretched out before them the Bay of Gaeta, with the volcanic islands of Ponza, Ventotene, and Ischia in the distance. Gaeta, a fortress which guards this gateway to the Neapolitan paradise, is built on the summit of Monte Orlando, occupying a small peninsula attached to the mainland by an isthmus only 300 yards in width. The port of Gaeta is well sheltered against westerly and northerly winds, and is much frequented by coasting vessels and fishing-smacks; but Gaeta itself is better known as a fortress. It was here the kingdom of the two Sicilies was put an end to by the abdication of Francis II. in 1861.

Towns of some importance are likewise met with on following the eastern road from Naples to Rome. The most considerable amongst them is San Germano, the name of which has recently been changed into Casino, in honour of the famous monastery of that name occupying a terrace to the west of the town, and affording a glorious prospect of hills and valleys. This monastery was founded in the sixth century by St. Bennet, or Benedict, and its rules have been accepted throughout

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the Eastern Church. No body of men has ever exercised a greater influence upon the history of Catholicism than these Benedictine monks of Monte Casino. At the height of its power the order held vast estates throughout Italy, and many popes and thousands of Church dignitaries have been furnished from its ranks. The library of Monte Casino is one of the most valuable in Europe, and the services formerly rendered to science by the Benedictines have saved this monastery from disestablishment, a favour likewise extended to the monastery of La Cava and the Charter-house of Pavia.

There are but few towns of importance in the mountain region of Naples. Arpino, the ancient Arpinum, the birthplace of Cicero and Marius, with cyclopean

Fig. 110.—The Marshes of Salpi.
Scale 1 : 225,000.

walls built by Saturn, is the most populous place in the upper valley of the Liri, to the south of the mountains of Mantese. Benevento occupies a central position on the Calore, the principal tributary of the Volturno, and several roads diverge from it. The ancient name of this place was *Maleventum*, but in spite of its change of name the town has frequently suffered from sieges and earthquakes, and of all the great edifices of its past there now remains only a fine triumphal arch erected in honour of Trajan. The city walls, nearly four miles in circumference, have for the most part been constructed from the fragments of ancient monuments.

Ariano, to the east of Benevento, and also in the basin of the Volturno, is built upon three hills commanding a magnificent prospect, extending from the

often snow-clad Matese Mountains to the cone of the Vultur. It lies on the railroad connecting Naples with Foggia and the Adriatic, and carries on a considerable trade. Campobasso, the capital of Molise, is likewise an important commercial intermediary, though still without a railway.

The commercial towns on the Adriatic slope of the Apennines are of greater importance than those to the east. Foggia, on the Tavoglieri di Puglia, upon which converge four railways and several high-roads, is a great mart for provisions, and in importance and wealth, though not in population, is the second city of Naples. Several smaller towns surround it like satellites, such as San Severo, Cerignola, and Lucera, which became wealthy in the thirteenth century, when the Saracens, exiled from Sicily by Frederick II., settled here. Foggia, however, and its sister cities, in spite of the proximity of the Bay of Manfredonia, have no direct outlet to the sea, for the coast for a distance of thirty miles, from Manfredonia to the mouth of the Otranto, is fringed by insalubrious lagoons and marshes. The reclamation of these is absolutely necessary to enable Southern Italy to develop its great natural resources. The largest of these lagoons or marshes, that of Salpi, has been reduced to the extent of one-half by the alluvium conveyed into it by the rivers Carapella and Ofanto, but as long as the new land remains uncultivated deadly miasmata will not cease. At the eastern extremity of this marsh stood the ancient city of Salapia.

At the extremity of the peninsula of the Gargano, to the north of these marshes, are the harbours of Manfredonia and Vieste, very favourably situated for sailing vessels compelled by stress of weather to put into port. The first harbour to the south of the marshes is Barletta, near which is the "Field of Blood," recalling the battle of Cannæ. Barletta exports cereals, wines, oil, and fruit, partly grown on the old feudal estates near the inland towns of Andria, Corata, and Ruvo. The latter, the ancient *Rubi*, has yielded a rich harvest of antiquities of every kind. The other coast towns to the south-east of Barletta are—Trani, which carried on a considerable Levant trade towards the close of the Middle Ages; Bisceglia; Molfetta; Bari, the most populous town on the Adriatic slope of Naples; and Monopoli, all of which are much frequented by coasting vessels. Tasano, near Monopoli, occupies the site of the ancient port of Gnatia, and, like Rubi, has well repaid the search for archæological remains.

Brindisi, at the northern extremity of the peninsula of Otranto, in the time of the Romans and during the Crusades, was one of the great stations on the route from Western Europe to the East, and is likely again to occupy that position. It lies at the very entrance to the Adriatic. Its roadstead is excellent, and its harbour one of the best on the Mediterranean. The entrance is narrow, and was formerly choked up with the remains of wrecks and mud, but is now practicable for steamers of the largest size. The two arms of the harbour bear some resemblance to the antlers of a stag, and to this circumstance the town is indebted for its name, which is of Messapian origin, and means "antler-shaped." Brindisi has recently become the European terminus of the overland route to India, and many new buildings have risen in honour of this event, which it

was expected would convert the town into an emporium of Eastern trade. These expectations have not been realised. Several thousand hurried travellers pass that way every year, but Marseilles, Genoa, and Trieste have lost none of their importance as commercial ports in consequence. Moreover, when the Turkish railways are completed, the position now held by Brindisi will most likely be transferred to Saloniki or Constantinople.*

Taranto, or Tarent, on the gulf of the same name, is making an effort, like Brindisi, to revive its ancient commercial activity. Its harbour, the *Piccolo Mare*, or "little sea," is deep and perfectly sheltered, and its roadstead, or *Mare Grande*, is fairly protected by two outlying islands against the surge. As at Spezia, springs

Fig. 111.—The Harbour of Brindisi in 1871.
Scale 1 : 80,000.

of fresh water, known as Citro and Citrello, rise from the bottom of the harbour as well as in the roadstead. The geographical position of Tarent enables it successfully to compete with Bari and the other ports of the Adriatic for the commerce of inland towns like Matera, Gravina, and Altamura, and it appears to be destined to become the great emporium for the Ionian trade. No other town of Italy offers equal facilities for the construction of a port, but the two channels, one natural and the other artificial, which join the two "seas" have become choked, and only small craft are now able to reach the harbour. Modern Tarent is a small town, with narrow streets, built to the east of the Greek city of that name, on the

* In 1862 1,100 vessels, of 75,000 tons, entered and cleared at Brindisi; in 1875 1,342 vessels, inclusive of 396 steamers, of 771,096 tons, in the foreign trade

limestone rock bounded by the two channels. Its commerce has been slowly increasing since the opening of the railway, its industry being limited to fishing, oyster-dredging, and the manufacture of bay-salt; and the Tarantese enjoy the reputation of being the most indolent people in Italy. The heaps of shells on the beach no longer supply the purple for which the town was formerly famous; but the inhabitants still make use of the byssus of a bivalve in the manufacture of very strong gloves.

The only towns of any importance in the peninsula stretching southwards from Brindisi and Tarent are Lecco and Gallipoli, the former surrounded by cotton plantations, the latter—the Kallipolis, or "beautiful city," of the Greeks—picturesquely perched on an islet attached by a bridge to the mainland. The surrounding country, owing to the want of moisture, is comparatively barren.

Fig. 112.—The Harbour of Taranto.

Scale 1 : 208,000.

The western peninsula of Naples is far better irrigated than that of Otranto, but this advantage is counterbalanced to a large extent by the mountainous nature of the country, and by its frequent earthquakes. Potenza, a town at the very neck of this peninsula, half-way between the Gulf of Tarent and the Bay of Salerno, most happily situated as a place of commerce, has repeatedly been destroyed by earthquakes, and its inhabitants have only ventured to rebuild it in a temporary manner.

The famous old cities of Calabria, such as Metapontum and Heraclea, have ceased to exist. Sybaris the powerful, with walls six miles in circumference, and suburbs extending for eight miles along the Crati, is now covered with alluvium and shrubs—"its very ruins have perished." The city of the Locri, to the south of Gerace, which existed until the tenth century, when it was destroyed by the Saracens, has at least retained ruins of its walls, temples, and other buildings.

The only one of these old cities still in existence is Cotrone, the ancient Crotona, the "gateway to the granary of Calabria." In travelling along the coasts of Greater Greece we feel astonished at the few ruins of a past which exercised so powerful an influence upon the history of mankind.

The existing towns of Calabria cannot compare in importance with those of a past age. Rossano, near the ruins of Sybaris, is the small capital of a district, and is visited only by coasters. Cosenza, in the beautiful valley of Crati, at the foot of the wooded Sila, keeps up its communications with Naples and Messina through the harbour of Paola. Catanzaro exports its oil, silk, and fruit either by way of the Bay of Squillace, on the shores of which Hannibal had pitched his camp, or through Pizzo, a small port at the southern extremity of the Bay of Santa Eufemia. Reggio, nestling in groves of lemon and orange trees at the foot of the Aspromonte, is the most important town of Calabria. It stands on the narrow strait separating the mainland from the island of Sicily, and could not fail to absorb some of the commerce passing through that central gateway of the Mediterranean. Messina and Reggio mutually complement each other, and the prosperity of the one must result in that of the sister city.*

VII.—Sicily.

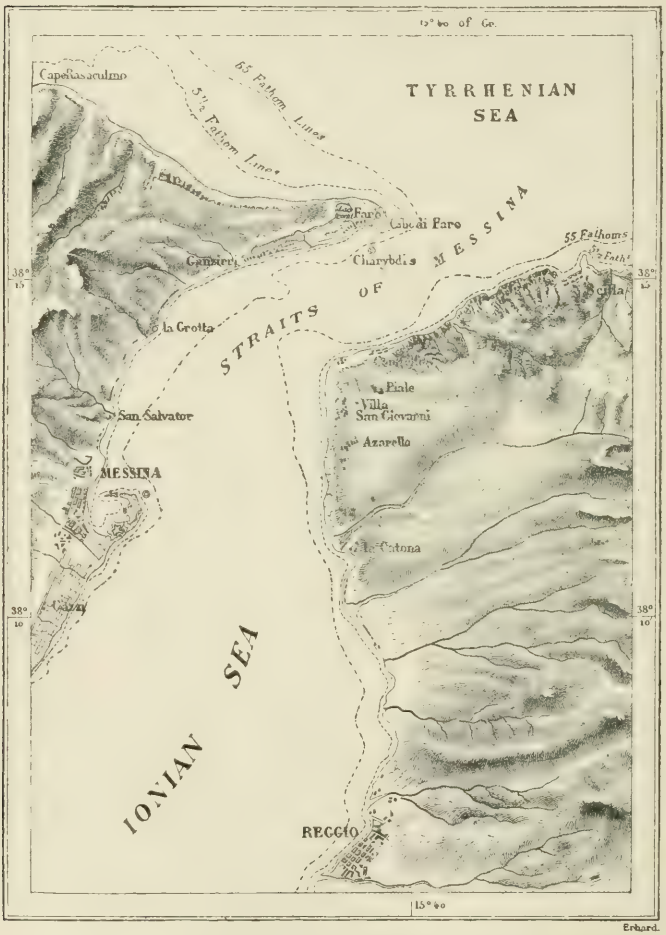
The Trinacria of the ancients, the island with the "three promontories," is clearly a dependency of the Italian peninsula, from which it is separated by a narrow arm of the sea. The Strait of Messina, where narrowest, is not quite two miles in width. It can be easily crossed in barges, and, with the resources at our command, a bridge might easily be thrown across it, ..nilar enterprises having succeeded elsewhere. It can hardly be doubted that before the close of this century either a tunnel or a bridge will join Sicily to the mainland, and human industry will thus restore in some way the isthmus which formerly joined the Cape of Faro to the Italian Aspromonte. We know nothing about the period when this rupture took place, but to judge from the ancient name of the strait—Heptastadion—it must have been much narrower in former times.†

* Towns of Naples having over 10,000 inhabitants (in 1870):—Naples (Napoli), 421,803; Bari, 49,423; Foggia, 34,181; Andria, 32,678; Reggio, 29,854; Barletta, 27,444; Molfetta, 26,516; Corato, 26,018; Trani, 24,026; Bitonto, 23,087; Taranto, 22,858; Castellammare di Stabia, 22,037; Cerignola, 21,739; Lecce, 21,081; Salerno, 20,611; Aversa, 19,734; Bisceglia, 19,007; Torre del Greco, 18,950; Catanzaro, 18,781; Potenza, 18,513; Gaeta, 18,385; Avellino, 18,260; Gerlizzi, 18,175; Maddaloni, 17,578; Afragola, 17,541; Francavilla Fontana, 17,457; Benevento, 17,370; Altamura, 17,004; Santa Maria Capua Vetere, 16,785; San Severo, 16,545; Torre Annunziata, 15,321; Ravo di Puglia, 15,055; Monte Sant' Angelo, 14,902; Rossano, 14,818; San Marco in Lamis, 14,540; Cosenza, 14,522; Caserta 14,578; Canosa di Puglia, 14,458; Ostuni, 14,422; Ariano di Puglia, 14,347; Matera, 14,262; Monopoli, 13,800; Minervino Murge, 13,630; Martina Franca, 13,410; Campobasso, 13,345; Brindisi, 13,194; Lucera, 13,064; Acerra, 12,858; Ceglia Messapico, 12,582; Gioja del Colle, 12,442; Pagani, 12,208; Fasano, 12,190; Capua, 12,174; Cittanova, 12,137; Palo di Colla, 11,887; Mola di Bari, 11,775; Pozzuoli, 11,751; Rionera in Voltara, 11,520; Amalfi, 11,225; Resina, 11,132; Sarno, 10,953; San Giovanni del Teduccio, 10,898; Nola, 10,771; Giugliano in Campania, 10,751; Lauria, 10,609; Frattamaggiore, 10,486; Corigliano Calabro, 10,481; Nicastro, 10,418; Cairano, 10,081; Montecorvo, 10,020; Conversano, 10,012.

† Minimum width of the Strait of Messina, 10,330 feet; maximum depth, 1,090 feet; average depth, 246 feet.

From an historical point of view Sicily may still be looked upon as a portion of the mainland, for the strait can be crossed almost as easily as a wide river. On the other hand, it enjoys all the advantages of a maritime position. Situate in the

Fig. 113.—The Strait of Messina.
Scale 1 : 150,000.



very centre of the Mediterranean, between the Tyrrhenian and the eastern basin, it commands all the commercial high-roads which lead from the Atlantic to the East. Its excellent harbours invite navigators to stay on its coasts; its soil is

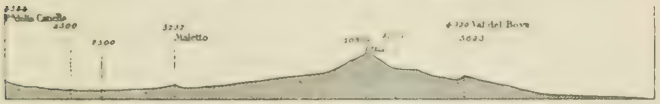
exceedingly fertile; the most varied natural resources insure the existence of its inhabitants; and a genial climate promotes the development of life. Hardly a district of Europe appears to be in a more favourable position for supporting a dense population in comfort. Sicily, indeed, is more densely populated and wealthier than the neighbouring island of Sardinia or either of the Neapolitan provinces, the Campania alone excepted, and rivals in importance the provinces of Northern Italy.*

Sicily, whenever it has been allowed to rejoice in the possession of peace and freedom, has always recovered with wonderful rapidity; and it would certainly now be one of the most prosperous countries if wars had not so frequently devastated it, and the yoke of foreign oppressors had not weighed so heavily upon it.

The triangular island of Sicily would possess great regularity of structure if it were not for the bold mass of Mount Etna, which rises above the shores of the Ionian Sea at the entrance of the Strait of Messina. From its base to the summit of its crater, that huge protuberance forms a region apart, differing from the rest of Sicily not only geologically, but also with respect to its products, cultivation, and inhabitants.

Ancient mariners mostly looked upon the Sicilian volcano as the highest mountain in the world; nor did they err much as respects the world known to

Fig. 114.—Profile of Mount Etna.



them, for only at the two extremities of the Mediterranean, in Spain and Syria, do we meet with mountains exceeding this one in height; and Mount Etna is not only remarkable from its isolated position, but likewise by the beauty of its contours, the lurid sheen of its incandescent lavas, and the column of smoke rising from its summit. From whatever side we approach Sicily, its snowy head is seen rising high above all the surrounding mountains. Its position in the very centre of the Mediterranean contributed in no small measure to secure to it a pre-eminence amongst mountains. It was looked upon as the "pillar of the heavens," and at a later epoch the Arabs only spoke of it as *el Jebel*, "*the* mountain," which has been corrupted by the people dwelling near it into "Mon gi bello."

The mean slopes of Mount Etna, prolonged as they are by streams of lavas extending in every direction, are very gentle, and on looking at a profile of this mountain it will hardly be believed that its aspect is so majestic. It occupies, in fact, an area of no less than 460 square miles, and its base has a development of about 80 miles. The whole of this space is bounded by the sea, and by the valleys of the Alcantara and Simeto. A saddle, only 2,820 feet in height, connects it in the north-west with the mountain system of the remainder of Italy. Small cones of eruption are met with beyond the mass of the volcano to the north

* Area of Sicily, 11,290 square miles; population in 1870, 2,595,300 souls; density, 227.

of the Alcantara, and streams of lava having filled up the ancient valley of the Simeto, that river was forced to excavate itself another bed through rocks of basalt, and now descends to the sea in rapids and cascades.

An enormous hollow, covering an area of ten square miles, and more than 3,000 feet in depth, occupies a portion of the western slope of the volcano. This is the Val di Bove, a vast amphitheatre of explosion, the bottom of which is dotted over with subsidiary craters, and which rises in gigantic steps, over which, when the mountain is in a state of eruption, pour fiery cascades of lava. Lyell has shown that this Val di Bove is the ancient crater of Mount Etna, but that, at some period not known to us, the existing terminal vent opened a couple of miles farther west. The steep sides of the Val di Bove enable us to gain a considerable insight into the history of the volcano, for the various layers of lava may be studied there at leisure. The cliffs upon which stands the town of Aci Reale afford a similar opportunity for embracing at one glance a long period of its history. These cliffs, over 300 feet in height, consist of seven distinct layers of lava, successively poured forth from the bowels of Mount Etna. Each layer consists nearly throughout of a compact mass, affording no hold for the roots of plants, but their surfaces have invariably been converted into tufa, or even mould, owing to atmospheric agencies which operated for centuries after each eruption. It has likewise been proved that these cliffs not only increased in height in consequence of successive eruptions, but that they were also repeatedly upheaved from below. Lines of erosion resulting from the action of the waves can be distinctly traced at various elevations above the present level of the Mediterranean. The lavas, too, have undergone a change of structure since they were poured forth, as is proved by beautiful caverns enclosed by prismatic columns of basalt, and by the islet of the Cyclops, near Aci Trezza.

During the last two thousand years Mount Etna has had more than a hundred eruptions, some of them continuing for a number of years. Hitherto it has not been possible to trace any regularity in these eruptions. They appear to occur at irregular intervals, and the quantity of lava poured forth from the principal or any subsidiary cone varies exceedingly. The most considerable stream of lava of which we have any record was that which overwhelmed the city of Catania in 1669. It first converted the fields of Nicolosi into a fiery lake, then enveloped a portion of the hill of Monpilieri, which for a time arrested its progress, and finally divided into three separate streams, the principal of which descended upon Catania. It swept away a part of that town, filled up its port, and formed a promontory in its stead. The quantity of lava poured forth on that occasion has been estimated at 3,532 millions of cubic feet; and nearly 40 square miles of fertile land, supporting a population of 20,000 souls, were converted into a stony waste. The double cone of Monti Rossi, with its beautiful crater now grown over with golden-flowered broom, was formed by the ashes ejected during that great eruption. More than 700 subsidiary cones, similar to the Monti Rossi, are scattered over the exterior slopes of Mount Etna, and bear witness to as many eruptions. The most ancient amongst them have been nearly obliterated in the

course of ages, or buried beneath streams of lava, but the others still retain their conical shape, and rise to a height of many hundred feet. Several amongst them are now covered with forests, and the craters of others have been converted into gardens—delightful cup-shaped hollows, where villas shine like gems set in verdure.

Most of these subsidiary cones lie at an elevation of between 3,300 and 6,500 feet above the sea, and it is there the internal forces make themselves most strongly felt. As a rule the subterranean activity is less violent near the summit, and during most of the eruptions the great terminal crater merely serves as a vent,

Fig. 115.—The Lava Stream of Catania.
Scale 1 : 2 ····

through which the aqueous vapours and gases make their escape. Fumaroles surrounding it convert the soil into a kind of pap, and the substances which escape from them streak the scoriæ with brilliant colours—scarlet, yellow, and emerald green. The internal heat makes itself felt on many parts of the exterior slopes. It converts loose rocks into a compact mass, far less difficult to climb than are the loose cinders of Mount Vesuvius. Travellers ascending the mountain need fear nothing from volcanic bombs. Showers of stone are occasionally ejected from the principal vent, but this is quite an exceptional occurrence. If it were not so, the small structure above the precipices of the Val di Bove, which dates from the

time of the Romans, and is known as the "Philosopher's Tower," would long ago have been buried beneath débris. A meteorological observatory might therefore be established with safety on the summit of this mountain, and no better station could be found for giving warning of approaching storms.

The summit of Mount Etna, 10,866 feet in height, does not penetrate the zone of perennial snow, and the heat emitted from the subterranean focus soon melts the incipient glaciers which accumulate in hollows. Nevertheless the upper half of the mountain is covered with a shroud of white during a great part of the year. It might be imagined that the snow and copious rains would give birth to numerous rivulets descending from the slopes of the volcano; but the small stones and cinders which cover the solid beds of lava promptly absorb all moisture, and springs are met with only in a few favoured spots. They are abundant on

Fig. 116.—Subsidiary Cones of Mount Etna.

the lower slopes, or in the immediate vicinity of the sea. One of these is the fountain of Acis, which issues from the chaos of rocks which Polyphemus is said to have hurled at the ships of sage Ulysses. Another gives birth to the river Amenano, which rises in the town of Catania, and hastens in silvery cascades towards its port. When we look at these clear springs in the midst of black sands and burnt rocks we are able to comprehend the fancy of the ancient Greeks, who regarded them as divine beings, in whose honour they struck medals and raised statues.

Though running streams are scarcely met with on the slopes of Mount Etna, its cinders retain a sufficient quantity of moisture to support a luxuriant vegetation. The mountain is clad with verdure except where the surface of the lava is too compact to be penetrated by the roots of plants. Only the highest regions, which are covered with snow during the greater part of the year, are barren. It is

a remarkable fact that the flora of the Alps should not be met with on Mount Etna, although the temperature suits it exactly.

Formerly the volcano was surrounded by a belt of forests occupying the zone between the cultivated lands and the region of snow and cinders. Such is the case no longer. On the southern slope, which is that usually ascended by tourists, there are no forests at all, and only the trunk of some ancient oak is occasionally met with. On the other slopes groves of trees are more frequent, particularly in the north, where there remain a few lofty trees, which impart quite an alpine character to the scenery. But the wood-cutters prosecute their work of extermination without mercy, and it is to be feared that the time is not very distant when even the last vestiges of the ancient forests will have disappeared. The magnificent chestnuts on the western slopes, amongst which could be admired until recently the "tree of the hundred horses," bear witness to the astonishing fertility of the lava. If the cultivators of the soil only desired it, a few years would suffice to restore to Mount Etna its ancient covering of foliage.

The cultivated zone occupying the lower slopes of the mountains presents in many places the appearance of a beautiful garden. There are groves of olive, orange, lemon, and other fruit trees, in the midst of which rise clumps of palms, and villas, churches, and monasteries peep out from this mass of verdure. The fertility of the soil is so great that it supports a population three or four times more numerous than that in any other part of Italy. More than 300,000 inhabitants dwell on the slopes of a mountain which might be supposed to inspire terror, and which actually bursts at intervals, burying fertile fields beneath a fiery deluge. Town succeeds town along its base like pearls in a necklace, and when a stream of lava effects a breach in this chain of human habitations it is closed up again as soon as the lava has had time to cool. From the rim of the crater the mountain climber looks down with astonishment upon these human ant-hills. The concentric zones of houses and verdure contrast curiously with the snows and ashes occupying the centre of the picture, and with the barren limestone rocks beyond the Simeto. And this is only a small portion of the vast and marvellous prospect, embracing a radius of 124 miles. Well may the beholder be enchanted by the unrivalled spectacle of three seas, of a deeper blue than the skies, washing the shores of Sicily, of Calabria, and of the islands of Æolia.

Mount Pelorus, which forms a continuation of the chain of the Aspromonte of Calabria, is of very inferior height to Mount Etna, but it had existed for ages when the space now occupied by the volcano was only a bay of the sea. It was formerly believed that a crater existed on the highest summit of Pelorus dedicated to Neptune, and now to the "Mother of God," or *Dinna Mare* (3,600 feet), but such is not the case. These mountains consist of primitive and transition rocks, with beds of limestone and marble on their flanks. They first follow the coast of the Ionian Sea, where they form numerous steep promontories, and then, turning abruptly towards the west, run parallel with that of the Æolian Sea. Their culminating point, near the centre, is known as Madonia (6,336 feet), and the magnificent forests which still clothe it impart to that part of the island

quite a northern aspect, and we might almost fancy ourselves in the Apennines or Maritime Alps. Limestone promontories of the most varied profile advance into the blue waters of the sea, and render this coast one of the most beautiful of the Mediterranean. We are seized with admiration when we behold the enormous quadrangular block of Cefalu, the more undulating hill of Termini, the vertical masses of Coltafano, and above all, near Palermo, the natural fortress of Monte Pellegrino (1,970 feet), an almost inaccessible rock, upon which Hamilcar Barca resisted for three years the efforts of a Roman army to dislodge him. Monte San Giuliano (2,300 feet), an almost isolated limestone summit, terminates this chain in the west. It is the Eryx of the ancients, who dedicated it to Venus.

The mountains which branch off from this main chain towards the south gradually decrease in height as they approach the sea. The principal slopes of the island descend towards the Ionian and Sicilian Seas, and all its perennial rivers—the Platani, Salso, and Simeto—flow in these directions. The rivers on the northern slope are mere *fiumare*, formidable after heavy rains, but lost in beds of shingle during the dry season. The lakes and swamps of the island are likewise confined to the southern slope of the mountains. Amongst them are the *pantani*, and the Lake, or *biviere*, of Lentini, which is the most extensive sheet of water in Sicily; the Lake of Pergusa, or Enna, formerly surrounded by flowery meadows in which Proserpine was seized by Pluto; the *biviere* of Terranova; and several marshy tracts, the remains of ancient bays of the sea. This southern coast of the island contrasts most unfavourably with the northern, for, in the place of picturesque promontories of the most varied outline, we meet with a monotonous sandy shore, devoid of all shade. Natural harbours are scarce there, and during the winter storms vessels frequenting it are exposed to much danger.

The southern slope of Sicily, to the south of the Madonia, consists of tertiary and more recent rocks, abounding in fossil shells mostly belonging to species still living in the neighbouring sea. In the hills to the south of Catania these tertiary rocks alternate with strata of volcanic origin, which are evidently derived from submarine eruptions. This process is still going on between Girgenti and the island of Pantellaria, where the submarine volcano of Giulia or Ferdinandea occasionally rises above the surface of the sea. It was seen in 1801, and thirty years later it had another eruption, resulting in the formation of an island four miles in circumference, which was examined by Jussieu and Constant Prévost. In 1863 it appeared for the third time. But the waves of the sea have always washed away the ashes and cinders ejected on these occasions, spreading them in regular layers over the bottom of the sea, and thus producing an alternation of strata similar to that observed at Catania. In 1840 the summit of this submarine volcano was covered with only six feet of water, but recently no soundings were obtained at a depth of fifty fathoms.

This submarine volcano is not the only witness to the activity of subterranean forces in Southern Italy We meet there with mineral springs discharging carbonic acid and other gases, which prove fatal to the smaller animals venturing within their influence, and with a naphtha lake near Palagonia, from which escape,

likewise, irrespirable gases. A similar phenomenon may be witnessed in connection with the Lake of Pergusa, which occupies an ancient crater about four miles in circumference, and usually abounds in tench and eels. From time to

Fig. 117.—The Maccalubas and Girgenti.

Scale 1 : 100,000.

time, however, an escape of poisonous gases appears to take place from the bottom of the lake, which kills the fish, whose carcasses rise to the surface. Another of these *salses* has made its appearance farther west, near the Palazzo Adriano,

and, indeed, the whole of underground Sicily appears to be in a state of chemical effervescence.

Next to Mount Etna the great centre of volcanic activity in Sicily appears to be near Girgenti, at a place known as the *Maccalubas*. The aspect of this spot changes with the seasons. In summer bubbles of gas escape from small craters filled with liquid mud, which occasionally overflows, and runs down the exterior slopes. The rains of winter almost obliterate these miniature volcanoes, and the plain is then converted into one mass of mud, from which the gases escape. At the beginning of this century the soil was occasionally shaken by earthquakes, and on these occasions jets of mud and stones were ejected to a height of ten or twenty yards. The Maccalubas appear now to be in a state of quiescence, for these mud volcanoes also seem to have their regular periods of rest and activity.

The deposits of sulphur, which constitute one of the riches of Sicily, undoubtedly owe their existence to these subterranean lakes of seething lava. These sulphur beds are met with in the tertiary strata extending from Centorbi to Cattolica, in the province of Girgenti. They date from the epoch of the Upper Miocene, and are deposited upon layers of fossil infusoria exhaling a bituminous odour. Geologists are not yet agreed on the origin of these sulphur beds, but it is most likely that they are derived from sulphate of lime carried to the surface by hot springs. In the same formation beds of gypsum and of rock-salt are met with, and the latter may frequently be traced from a saline effervescence known as *occhi di sale* ("eyes of salt").

Sicily, like Greece, enjoys one of the happiest climates. The heat of summer is tempered by sea breezes which blow regularly during the hottest part of each day. The cold of winter would not be felt at all if it were not for the total absence of every comfort in the houses, for ice is not known, and snow exceedingly rare. The autumn rains are abundant, but there are many fine days even during that season. The prevailing winds from the north and west are salubrious, but the *sirocco*, which usually blows towards the south-east, is deadly, especially when it reaches the northern coast. It generally blows for three or four days, and during that time no one thinks of clarifying wine, salting meat, or painting houses or furniture. This wind is the great drawback to the climate. In some parts of Sicily the exhalations from the swamps are dangerous, but this is entirely the fault of man. It is owing to his neglect that Agosta and Syracuse suffer from fevers, and that death forbids the stranger to approach the ruins of ancient Himera.*

Temperature and moisture impart to the vegetation of the plains and lower valleys a semi-tropical aspect. Many plants of Asia and Africa have become acclimatized in Sicily. Groups of date-palms are seen in the gardens, and the plains around Sciacca, almost African in their appearance, abound in groves of dwarf palms, or *giummare*, to which ancient Selinonte is indebted for its epithet of *Palmosa*. Cotton grows on the slopes of the hills up to a height of 600 feet above the sea; bananas, sugar-cane, and bamboos do not require the shelter of green-

* Mean annual temperature at Palermo and Messina, 64° F.; at Catania and Girgenti, 68° F.: rainfall at Palermo, 26 inches.

houses; the *Victoria regia* covers the ponds with its huge leaves and flowers; the papyrus of the Nile, which is not known anywhere else in Europe, chokes up the bed of the Anapo, near Syracuse: formerly it grew also in the Oreto, near Palermo, but it does so no longer. The cactus of Barbary (*Cactus opuntia*) has become the most characteristic plant of the coast districts of Sicily, and is rapidly covering the most unpromising beds of lava. These and other plants flourish most luxuriantly on the southern slopes of Mount Etna, where the orange-tree bears fruit at a height of 1,700 feet, and the larch ascends even to 7,400 feet. These slopes facing the African sun are the hottest spots in Europe, for the volcano shelters them from the winds of the north, whilst its dark-coloured scoriæ and cinders absorb the rays of the mid-day sun.

Those portions of Sicily which are clothed with trees or shrubs are always green, for orange-trees, olive-trees, carob-trees, laurels, mastic-trees, tamarisks, cypresses, and pines retain their verdure even in winter, when nature wears a desolate aspect in our own latitudes. There is no "season," so to say, for with a little care all kinds of vegetables can be had throughout the year. The gardens around Syracuse are famous above all others, because of the striking manner in which they contrast with the naked rocks surrounding them. The most delightful amongst them is the *Intagliatella*, or *Latomia de' Greci*, which occupies an old quarry where Greek slaves dressed the stones used in erecting the palaces of Syracuse. The vegetation there is most luxuriant; the trunks of the trees rise above masses of shrubs, their branches are covered with creeping plants, flowers and ripening fruit cover the paths, and birds without number sing in the foliage. This earthly paradise is surrounded by precipitous walls of rock covered with ivy, or bare and white as on the day when Athenian slaves were at work there.

Sicily lies on the high-road of all the nations who ever disputed the command of the Mediterranean, and its population consequently consists of a mixture of the most heterogeneous elements. Irrespectively of Sicani, Siculi, and other aboriginal nations, whose position amongst the European family is uncertain, but who probably spoke a language akin to that of the Latins, we know that Phœnicians and Carthaginians successively settled on its shores, and that the Greeks were almost as numerous there as in their native country. Twenty-five centuries have passed since the Greeks founded their first colony, Naxos, at the foot of Mount Etna. Soon afterwards Syracuse, Leontini, Catania, Megara Hyblæa, Messina, and other colonies sprang into existence, until the whole of the littoral region was in the hands of the Greeks, the native populations being pushed back into the interior. In Sicily the Greek met with the same climate, and with rocks and mountains similar in aspect to those of his native home. The "Marmorean" port and the wide bay of Syracuse, the acropolis and Mount Hybla, do they not recall Attica or the Peloponnesus? The fountain of Arethusa, on the island of Ortygia, which is supplied through underground channels, reminds us of the fountain of Erasinos and of many others in Hellas, which find their way through fissures in the limestone rocks to the seashore. The Syracusans said that the river Alpheus, enamoured of

the nymph Arethusa, did not mingle its waters with those of the Ionian, but found its way through subterranean channels to the coast of Sicily, where it rose again at the side of the fountain dedicated to the object of his adoration, bringing the flowers and fruits of beloved Greece. This legend bears testimony to the great love which the Greek bore his native land, whose very fountains and plants were supposed to follow him into his new home.

If we may judge from the number of inhabitants with which the principal towns were credited at that time, Sicily must have had a population of several millions of Greeks. The Carthaginian merchants and soldiers, on the other hand, though they were the masters of portions of the island for two or three centuries, never settled upon it, and only a few walls, coins, and inscriptions bear witness now of their ever having been present. It has been very judiciously remarked by M. Dennis that the most striking evidence of their reign is presented in the desolate sites of the cities of Himera and Selinus. At the same time we must not forget that the Carthaginians, by intermingling with the existing population, materially affected the ulterior destinies of the island. The Romans, who held Sicily for nearly seven centuries, did so in a still higher degree. Vandals and Goths likewise left traces behind them. The Saracens, themselves a mixed race, imparted their Southern impetuosity to the Sicilians, whilst their conquerors, the Normans, endowed them with the daring and indomitable courage which at that period animated these sons of the North. In 1071, when the Normans laid siege to Palermo, no less than five languages were spoken on the island, viz. Arabic, Hebrew, Greek, Latin, and vulgar Sicilian. But Arabic was the tongue of the civilised inhabitants, and even during the dominion of the Normans inscriptions upon palaces and churches were inscribed in it. It was at the court of King Roger that Edrisi wrote his "Geography," one of the great monuments of science. In 1223 the last Arabs were made to emigrate to Naples, but by that time much Arab blood already flowed through the veins of the inhabitants.

Later on, the character of the population was still further modified by French, Germans, Spaniards, and Aragonese, and all this helped to make them a people differing in appearance, manners, habits, and feelings from their Italian neighbours. These islanders look upon every inhabitant of the mainland as a foreigner. The absence of roads on the island enabled the different groups of its population to maintain their distinct idioms and character during a very long period. The Lombards whom the Romans transplanted to Benevento and Palermo spoke their native dialect long after it had become extinct in Lombardy. Even now there are about 50,000 Sicilians who speak this ancient Lombard tongue. At San Fratello, on a steep hill on the northern coast, this idiom is spoken with the greatest purity. Nor has the Italian wholly supplanted the vulgar Sicilian in the interior of the island. We meet with many Greek and Arab words. One of the most curious words is that of *val*, which is applied to various districts of Sicily, and is supposed to have been derived from *vali*, the Arab term for "governor." The Sicilian idiom is less sonorous than the Italian. Vowels standing between consonants are frequently suppressed, and the *o*, and even the *a* and *i* (*ee*), are

changed into *oo*, which renders the speech hard and indistinct. The language lends itself, however, admirably to poetry, and the Sicilian popular songs are quite equal in natural grace and delicacy to the much-admired *rispetti* of Tuscany.

Of all the emigrants who have settled on the island the Albanians alone have not become merged in the general population. Locally known as Greci, they still form separate communities, speaking their own language and observing special religious rites, in several of the towns of the interior, and more especially at Piana de' Greci, which occupies a commanding hill to the south of Palermo. Nor is the fusion amongst the other races as complete as it appears to be at the first glance. The population around Mount Etna, who are, perhaps, more purely Greek in blood than the Greeks themselves, are noted for their grace, gaiety, and sweetness of disposition. They are the most intelligent portion of the population of Sicily. Those of Trapani and San Giuliani are said to be the best-looking, and their women delight the stranger by the regularity and beauty of their features. The Palermitans, on the other hand, in whose veins flows much Arab blood, are for the most part unprepossessing in their appearance. They open their house but rarely to strangers, and jealously shut up their women in its most retired part.

The most ferocious usages of war, piracy, and brigandage have kept their ground longer at Palermo and its environs than anywhere else. The laws of the *omerta*, or "men of heart," make vengeance a duty. *A chi ti toglie il pane, è tu toglili la vita!* ("Take the life of him who has taken your bread!") is its fundamental principle; but in practice Palermitan vengeance is far from possessing the simplicity of the Corsican vendetta, for it is complicated by the most atrocious cruelties. No less than four or five thousand Palermitans are said to be affiliated to the secret league of the *maffia*, whose members subsist upon every kind of roguery. Up to 1865 the brigands were masters in the environs of that town. They virtually laid siege to the town, separating it from its more distant suburbs. Strangers were afraid to leave lest they should be murdered or captured by bandits; and no farmer could harvest his corn or olives, or shear his sheep, without paying toll to these highwaymen. More than ten years have passed since then, but in spite of measures of exceptional severity the maffia still exists.

The history of this association, which dates its origin back to the time of the Norman kings, remains yet to be written. It has always flourished most in time of political troubles, and consequent misery. No doubt things have grown worse in the course of the last twenty years; taxes have been increased, the conscription established, and many abrupt changes, such as are inseparable from a new political regimen, have been introduced. The people, accustomed to put up with ancient abuses, have not yet learnt to bear the burdens imposed in connection with the annexation of the island to the kingdom of Italy. Nevertheless the Sicilians grow more Italian from day to day. Community of language and of interests attaches the island to the peninsula, and the time is not far distant when both countries will gravitate in the same orbit. Italy is most highly interested in establishing feelings of friendship with the inhabitants of the island, and in developing its resources. The rapid increase of the population, which is said to have

tripled since 1734, bears witness to the great natural riches of the country; and what might not be achieved if the barbarous processes now in force there were superseded by the scientific methods of our own time?

Sicily was the favourite haunt of Ceres, and in the plain of Catania this beneficent goddess taught man the art of cultivating the soil. The Sicilians have not forgotten this teaching, for nearly half the area is covered with corn-fields; but they have not improved their system of cultivation since those fabulous times, and improvements can hardly be effected as long as the restrictions imposed by the feudal tenure introduced by the Normans are allowed to exist. The agricultural implements are of a primitive kind, manure is hardly known, and the fate of the crops depends entirely upon nature. When travelling through the country districts of Sicily, we are struck by not meeting with isolated houses. There are no villages, for all the cultivators of the soil live in towns, and are content to travel daily to their fields, which are occasionally at a distance of six miles. Sometimes they pass the night there, in a cavern or a ditch covered with boughs, and at harvest-time the labourers sleep in improvised sheds. This absence of human habitations imparts an air of solemn sadness to vast corn-fields covering valleys and slopes, and we almost fancy we are wandering through a deserted country, and wonder for whose benefit the crops are ripening.

Corn-fields cover a greater area than that devoted to the cultivation of all other objects put together; nevertheless the latter articles represent a higher pecuniary value. The orchards, vineyards, and gardens near the towns are a far greater source of wealth than the distant corn-fields. In former times wheat was the principal article of export; now Sicily is no longer a granary, but promises to become a vast emporium of fruit. Even now the crop of oranges grown there, which consists of seven kinds, subdivided into four hundred varieties, represents a value of £2,000,000 a year. The marvellous gardens which surround Palermo are steadily increasing at the expense of the ancient plantations of ash, and ascend the hills to a height of 1,150 feet. Hundreds of millions of oranges are exported annually to Continental Europe, England, and America, and the inferior sorts are converted into essential oils, citric acid, or citrate of lime. The last is used in printing stuffs, and Sicily enjoys a monopoly in its manufacture.

Sicily likewise occupies a foremost place as a vine-growing country, and supplies more than a fourth of the wine produced throughout Italy. The cultivation of the vine, which is carried on to a large extent by foreigners, is much better understood there than on the neighbouring peninsula, and the wines exported from Marsala, Syracuse, Alcamo, and Milazzo are justly held in high estimation. An excellent wine is also grown on the south and western slopes of Mount Etna, to which the heat of the sun imparts much fire. England and non-Italian Europe are the great consumers of the wines of Sicily, as they are of its oils, almonds, cotton, saffron, sumach, and manna, extracted, like that of the Calabrias, from a kind of ash. Raw silk, which Sicily was the first to produce in Europe, is likewise exported in considerable quantities.

Sulphur is the great mineral product of the island. The beds vary much in

richness, but even where they contain only five or six per cent. a light brought to the walls of the mine will cause the sulphur to boil like pitch. The blocks extracted from the mine are piled up in the open air, where they remain exposed to the destructive action of the atmosphere. The fragments are then heaped up over the flame of a furnace, which causes the stones to split, the melted sulphur flowing into moulds placed beneath. By this primitive process only two-thirds of the sulphur contained in the rock are extracted, but it proves nevertheless most remunerative. About 200,000 tons of sulphur, or more than two-thirds of the sulphur required for manufacturing purposes throughout Europe, are annually exported from Sicily, and the known deposits of the island have been computed to contain from 40,000,000 to 50,000,000 tons. To the north of Girgenti and in other parts of Sicily sulphureous plaster has been used in the construction of the houses, and the atmosphere there is at all times impregnated with an odour of sulphur.

Rock-salt is met with in the same formations as the sulphur, and in quantities almost inexhaustible, but salt is not a rare article, and even the Sicilians prefer to gather it from the salt swamps extending along the coast, the most productive of which are near Trapani, at the western extremity of the island. At the same spot the sea yields the best coral of Sicily. The tunny fishery is carried on mostly in the great bays between Trapani and Palermo, while most of the sword-fish are captured in the Strait of Messina. The seas of Sicily abound in fish, and the islanders boast of being the most expert fishermen of the Western Mediterranean.

Until recently communications in Sicily were kept up almost exclusively by sea. In 1866 the only carriage road of the island, which connects Messina with Palermo, was hardly made use of by travellers, and even now the most important mines of sulphur and salt communicate with the seashore only by mule-paths; and the inhabitants are actually opposed to the construction of roads, from fear of their interfering with the existing modes of transport. The road which connects the harbour of Terranova with Caltanissetta has been under construction for twenty years, although it is the only one which joins the interior of the country to the sea-coast. Railways to some extent supply this deficiency of roads, but are being built very slowly, hardly more than 250 miles being at present open for traffic.

Palermo the "happy," the capital of Sicily, is one of the great towns of Italy. At the time of the Arabs it surpassed all towns of the peninsula in population, but at present, though increasing rapidly, it yields to Naples, Milan, and Rome. No other town of Europe can boast of an equally delicious climate, nor is any fairer to look upon from a distance. Bold barren mountains enclose a marvellous garden, the famous "shell of gold" (*conca d'oro*), from the midst of which rise towers and domes, palms with fan-shaped leaves, and pines, commanded in the south by the huge ecclesiastical edifices of Monreale. Termini is the only city of Sicily which rivals Palermo in the beauty of its site, and it truly merits its epithet of *splendissime*.

But the beauty of the country contrasts most painfully with the misery and filth reigning in most of the quarters of the capital. Palermo has its sumptuous edifices. It boasts of a cathedral lavishly decorated; its royal palace and palatine chapel, covered with mosaics, and harmoniously combining the beauties of Byzantine, Moorish, and Roman art, are unique of their kind; the church of Monreale, in one of its suburbs, may challenge Ravenna by the number of its

Fig. 118.—Palermo and Monte Pellegrino.

mosaics. There are Moorish palaces, a few modern monuments, and two broad streets, which a Spanish governor had made in the shape of a cross. But, besides these, we only meet with dark and narrow streets and wretched tenements, the windows of which are stuffed with rags. Down to a recent period Palermo was undeserving its Greek name of "Port of all Nations." Enclosed within mountains, and having no communications with the interior, its commerce was merely local, and its exports were limited to the produce of its fisheries and of its gardens. Though

far more populous than Genoa, its commerce is only half that of the Ligurian city, but it is rapidly on the increase.

Trapani, a colony of the Carthaginians like Palermo, and Marsala, so famous for its wines, at the western extremity of the island, are proportionately far busier than the capital. Trapani, built on a sickle-shaped promontory, carries on a lively trade. The salt marshes near it are amongst the most productive in all Italy;* tunny, coral, and sponge fishing is carried on; and the artisans of the town are skilled as weavers, masons, and jewellers. The harbour is one of the best in Italy; the roadstead is well sheltered by the outlying Ægadian Islands; and the ambition of the inhabitants, who desire to look forward to a time when Trapani will be the principal emporium for the trade with Tunis, is likely to be realised on the completion of a railway to Messina. The harbour of Mazzara, the outlet for the produce of the inland towns of Castelvetrano and Salemi, lies closer to Tunis, but its shelter is indifferent. As to Marsala—the "Mars ed Allah," or God's haven, of the Arabs—its port was filled up by Charles V., and has only recently been reconstructed. It is, however, not of sufficient depth for large vessels, and only salt and wine are exported from it to France and England. Marsala occupies the site of the ancient city of Lilybæum, which had a population of 900,000 souls when Diodorus Siculus wrote his Geography. It has recently become famous in consequence of the landing there of Garibaldi and his thousand followers in 1860, and its being the spot from which they entered upon the triumphant march which ended in the battle of the Volturno and the capture of Gaeta.

Messina the "noble" is the great commercial centre of Sicily, and the only port of that island where vessels of all nations meet. Messina is a stage on the ocean high-roads which join or connect Western Europe and the Levant. Its roadstead is one of the safest, and vessels in distress are certain to find protection there. Moreover, vessels coming from the Tyrrhenian, and fearful of encountering the dangerous currents of the strait during a storm, may easily find shelter at Milazzo, to the north of it. The port of Messina is formed by a sickle-shaped tongue of land, making a natural breakwater.† There are few cities in Europe which are more exposed to the destructive action of earthquakes than Messina, and the traces of the great shock of 1783, which swamped the vessels in the harbour, undermined the palaces along the seashore, and caused the death of more than a thousand persons, have not yet entirely disappeared.

Catania, the sub-Etnean, as its Greek name implies, is menaced not only by earthquakes, but also by volcanic eruptions. It, too, enjoys a high amount of commercial prosperity, and exports the surplus produce of the towns situated at the foot of the volcano, among which are Acireale, with its orange groves; Giarre, with its dusty streets; Paterno, abounding in thermal springs; Aderno, on the

* The salt marshes of the province of Trapani cover an area of 2,100 acres, and yielded, in 1865, 55,000 tons of salt, valued at £24,200.

† In 1862 27,596 vessels, of 1,825,232 tons burden, entered and cleared from Sicilian ports; in 1869 34,989 vessels, of 2,869,327 tons; in 1873 70,974 vessels, of 5,942,700 tons. In 1875 the number of vessels and tonnage which entered and cleared was—at Messina, 9,243 vessels, of 2,335,144 tons; at Palermo, 11,692 vessels, of 1,812,195 tons; at Catania, 5,137 vessels, of 529,539 tons; and at Trapani, 5,407 vessels, of 288,475 tons.

summit of a rock of lava; Bronte, at the junction of two streams of scoriæ; and Randazza, commanded by an ancient Norman castle. Catania also monopolizes the export of the produce of the inland districts of Eastern Sicily; it is the great railway centre of the island, and several carriage roads converge upon it. Its port has grown too small for the business carried on there, and it is proposed to enlarge it by means of piers and breakwaters.

It is quite natural that on an island, no locality of which is more than forty miles

Fig. 119.—Trapani and Marsala.
Scale 1 : 270,000.

from the sea, all great towns should be met with on the coast, where there are greater facilities for commerce. Still a few centres of population sprang up in the interior, either in the midst of the most fertile districts or at the crossings of the most-frequented lines of communication. Nicosia, the Lombard city, is thus a natural place of passage between Catania and the northern coast of the island. Corleone occupies a similar position with respect to Palermo and the African slope

of the island. Castro Giovanni, the ancient Enna, likewise occupies a privileged position, for it stands on an elevated plateau in the very centre of the island: a large stone near it is said by the inhabitants to be an ancient altar of Ceres. Piazza Armerina *l'opulentissime*, and Caltagirone, surnamed *la gratissima* on account of the fertility of its fields, are both populous towns, which carry on a considerable commerce through Terranova, in the building of which the stones of the old temples of Gela have been utilised. Caltanissetta, farther to the west, and its neighbour Canicatti, export their produce through the port of Licata.

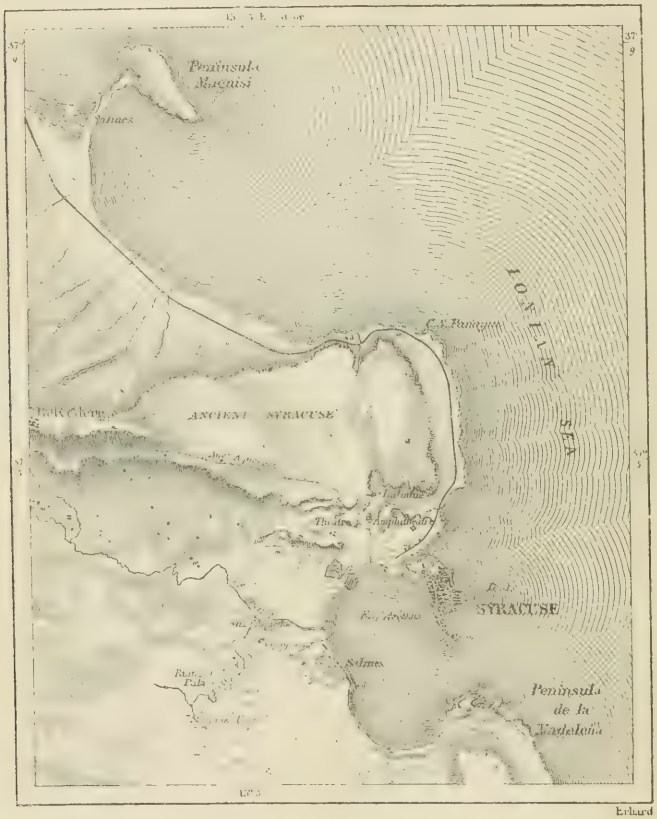
In the south-eastern corner of Sicily there are likewise several inland towns of some importance, amongst which Ragusa and Modica are the most considerable. Comiso, an industrious place, lies farther to the west, and is surrounded by cotton plantations. The valley of the Hipparis, sung by Pindar, separates it from Vittoria, the saline plains of which furnish much of the soda exported to Marseilles. Noto, like most towns in that part of Sicily, is at some distance from the coast, but its twin city, Avola, stands upon the shore of the Ionian Sea. Noto and Avola were both overthrown by the earthquake of 1693, and have been rebuilt with geometrical regularity near their former sites. The fields of Avola, though not very fertile by nature, are amongst the best cultivated of the island, and it is there only that the production of the sugar-cane has attained to any importance.

On the northern slope of the hills forming the back-bone of the island there are several other towns inhabited by the agricultural population. Lentini, the ancient Leontium, which boasts of being the oldest city in the island, is at present only a poor place, having been wholly rebuilt since the earthquake of 1693. Militello has been restored since the same epoch, and Grammicheli was founded in the eighteenth century to afford a shelter for the inhabitants of Occhiala, which was destroyed by an earthquake. Vizzini and Licodia di Vizzini are remarkable on account of the beds of lava near them, which alternate with layers of marine fossils, and Mineo stands near a small crater of the swamp of Palici. The popular songs of Mineo are famous throughout Sicily. The marvellous "stone of poetry" is shown near it, and all those who kiss it are said to become poets.

Southern Sicily is poor in natural ports, and formerly, along the whole of that part of the coast which faces Africa, there were only open roadsteads and beaches. On the Ionian coast, however, two excellent harbours are met with, viz. those of Agosta and Syracuse, which are very much like each other in outline and general features. Agosta, or Augusta, the successor of the Greek city of Megara Hyblæa, is now nothing more than a fortress besieged by fever. Syracuse, the ancient city of the Dorians, and at one time the most populous and wealthy city of the Mediterranean, has been reduced to a simple provincial capital. That city, whose inhabitants even during the last century celebrated their great victory over the Athenians, is now hardly more than a heap of ruins. Its "marble port," formerly surrounded by statues, is now frequented only by small boats, and its great harbour, large enough for contending squadrons, lies deserted. All that remains of it is contained in the small island of Ortygia,

separated from the mainland by fortifications, a ditch, and the swamps of Syraca. The vast peninsula of limestone formerly occupied by the city is at present inhabited only by a few farmers, whose houses stand near the canals of irrigation. The grand edifices erected by the inhabitants of ancient Syracuse are

Fig. 120.—Syracuse.
Scale 1 : 100,000



now represented by the ruins of columns on the banks of the Anapo rising from the "azure" fountain of Cyane; by the fortifications of the Epipolæ and Euryelum erected by Archimedes, and now known as Belvedere; by the remains of baths, an enormous altar large enough for hecatombs of sacrifices, an amphitheatre, and an admirable theatre for 25,000 spectators, who were able to see at a glance from their

seats the whole of the ancient city, with its temples and fleets of merchantmen. Nothing, however, is better calculated to convey an idea of the ancient grandeur of the city than the vast quarries or *latomiæ* and the subterranean catacombs, more extensive than those of Naples, and not yet wholly explored. In former times the summit of the island of Ortygia was occupied by an acropolis, in which stood a temple of Minerva, a rival of the Parthenon of Athens. Sailors, on leaving

Fig. 1.1.—Temple of Concord at Girgenti.

the port, were bound to look towards this temple, holding in their hands a vase of burning charcoal taken from the altar of Juno, which they flung into the sea when they lost sight of it. Portions of the temple still exist, but its beautiful columns have been covered with plaster and incorporated in an ugly church.

There are other Hellenic ruins in Sicily, which, in the eyes of artists, make that island a worthy rival of Greece itself. Girgenti, the ancient Acragas, or Agri-

gente, which numbered its inhabitants by hundreds of thousands, but is now a poor place like Syracuse, possesses ruins of at least ten temples or religious edifices, of which that dedicated to Olympian Jupiter was the largest in all Italy, and has been made use of in the construction of the present mole. Another, that dedicated to Concord, is in a better state of preservation than any other Greek temple outside the limits of Hellas. The modern city occupies merely the site of the ancient acropolis, and is built upon a layer of shelly sandstone, which descends in steps towards the sea. The cathedral has been built from materials taken from a temple of Jupiter Atabyrios, and its baptismal font is an ancient sarcophagus upon which are represented the loves of Phædra and Hippolytus. In former times Agrigente reached to within a couple of miles from the sea. The modern port, named in honour of one of the most famous sons of the city, lies to the west of the ancient Hellenic *Emporium*, at a distance of four miles from the city. It is the busiest harbour on the southern coast, and large quantities of sulphur are exported from it (see Fig. 117, p. 317).

Sciacca, another seaside town farther to the west, in one of those localities of the island most exposed to earthquakes, boasts of being the modern representative of Selinus, though that Greek city was situated about fourteen miles farther west, to the south of Castelvetrano. Its seven temples have been overthrown by earthquakes, but they still present us with remains of the purest Doric style. The metopes of three of them have been conveyed to Palermo, where they form the most precious ornaments of the museum.

Segesta, on the north coast, no longer exists, but there still remain the ruins of a magnificent temple. Other remains of Greek art abound in all parts of the islands, and there are also monuments erected by the Romans. If we contrast these ancient edifices with those raised since by Byzantines, Moors, Normans, Spaniards, and Neapolitans, we are bound to admit that they exhibit no progress, but decadence. Alas! how very much inferior are the inhabitants of modern Syracuse in comparison with the fellow-citizens of an Archimedes!

Sicily offers most striking examples of towns changing their positions in consequence of political disturbances. When the ancient Greek cities were at the height of their power they boldly descended to the very coast; but when war and rapine got the upper hand—when Moorish pirates scoured the sea, and brigandage reigned in the interior—then it was that most of the cities of Sicily took refuge on the summits of the hills, abandoning their low-lying suburbs to decay, and allowing them finally to disappear. Girgenti is a case in point. Some of the towns occupy sites of much natural strength, and are almost inaccessible. Such are Centuripe, or Centorbi, which stretches along the edge of a rock to the west of the Simeto, and San Giuliano, the town of Astarte, which stands on the summit of a pyramidal rock 1,200 feet in height above Trapani. But, on the return of peace, the inhabitants abandoned their eyries and came back to the plain or coast. All along the northern coast, from Palermo to Messina, the towns on the *marina*, or beach, kept increasing at the expense of the *boryos* occupying the summits of the mountains, and in many instances the latter were deserted altogether. Cefalu

affords a striking illustration of this change. The modern city nestles at the foot of a bold promontory, upon the summit of which may still be seen the crenellated walls of the old town, within which nothing now remains excepting a small cyclopean temple, the most venerable ruin of all Sicily, which has resisted the ravages of thirty centuries.*

The Æolian or Liparic Islands.

The Æolian or Liparic Islands, though separated from Sicily by a strait more than 300 fathoms in depth, may nevertheless be looked upon as a dependency of the larger island. Some of these volcanic islands, "born in the shadow of Mount Etna," lie on a line connecting that volcano with Mount Vesuvius, and they originated probably during the same convulsion of nature. They all consist of lavas, cinders, or pumice, ejected from volcanoes. Two amongst them, Vulcano and Stromboli, are still active volcanoes, and the flames and undulating columns of smoke rising from them enable mariners and fishermen to foretell changes of temperature or wind. It is probable that this intelligent interpretation of volcanic phenomena was the reason why these islands were dedicated to Æolus, the god of the winds, who there revealed himself to mariners.

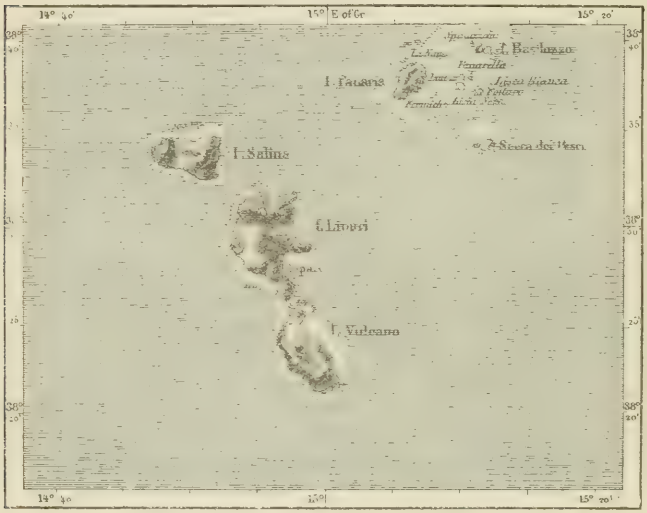
Lipari, the largest and most central of these islands, is at the same time the most populous. A considerable town, commanded by an ancient castle, rises like an amphitheatre on its northern shore. A well-cultivated plain, abounding in olive-trees, orange-trees, and vines, surrounds the town, and the slopes of the hills are cultivated almost to their very summits. The population, as in Sicily, has been recruited from the most diverse elements since the time that Greek colonists from Rhodes, Cnidus, and Selinus entered into an alliance with the aboriginal inhabitants. This intermixture of races is proceeding now as much as ever, for commerce continually introduces fresh blood, and many Calabrian brigands have been conveyed to the island, where they have become peaceable citizens. The population is now permitted to multiply in peace, for the volcanoes of Lipari have been quiescent for centuries. The Lipariotes have a legend according to which St. Calogero chased the devils from the islands, and shut them up in the furnaces of Vulcano, and we may infer from this that the last volcanic eruption took place soon after the introduction of Christianity; that is to say, about the sixth century. The existence of subterranean forces manifests itself now only in thermal springs and

* Towns of Sicily having more than 10,000 inhabitants (in 1871):—Palermo, 186,406; Messina, 71,921; Catania, 84,397; Marsala, 34,202; Modica, 33,169; Trapani, 28,052; Acireale, 26,092; Caltagirone, 25,978; Ragusa Superiore, 21,494; Caltanissetta, 21,464; Canicatti, 20,908; Alcamo, 20,830; Castelvetrano, 20,420; Partinico, 20,098; Syracuse (Siracusa), 20,035; Termini Imerese, 19,646; Girgenti, 19,603; Sciacca, 18,896; Piazza Armerina, 18,252; Vittoria, 17,528; Giarre, 17,414; Comiso, 16,694; Corleone, 16,150; Licata, 15,966; Favara, 15,253; Vizzini, 14,942; Terranova di Sicilia, 14,911; Paterno, 14,790; Noto, 14,767; Aderno, 14,673; Bronte, 14,589; Nicosia, 14,544; Castrogiovanni, 14,511; Barcellona Pozzo di Gotto, 14,471; Salemi, 14,096; Palma di Montechiaro, 13,497; Monreale, 13,496; Gangi, 13,057; San Cataldo, 12,899; Biancavilla, 12,631; Partana, 12,467; Mazzara del Valle, 12,155; Leonforte, 12,010; Mazzarino, 11,951; Avola, 11,912; Agira, 11,876; Bagheria, 11,651; Riesi, 11,548; Agosta, 11,382; Castellamare del Golfo, 11,280; Mistretta, 11,218; Racalmuto, 11,012; Niscemi, 10,750; Sciccli, 10,724; Lentini, 10,578; Cefalu, 10,194; Froina, 10,193; Grammicheli, 10,192; Pietraperzia, 10,149; Palazzolo Acreide, 10,132.

steam jets, which have been visited from the most ancient times for the cure of diseases. Earthquakes, however, are of frequent occurrence, and that of 1780 so much frightened the inhabitants that with one accord they dedicated themselves to the Virgin Mary. Dolomieu, who visited Lipari in the year following, found them wearing a small chain on the arm, by means of which they desired to show that they had become the slaves of the "Liberating Virgin."

Lipari is a land of promise to the geologist, on account of the great variety of its lavas. Monte della Castagna is wholly composed of obsidian. Another hill, Monte Bianco, consists of pumice, and, when seen from a distance, has the appearance of

Fig. 122.—The Central Portion of the Æolian Islands.



being covered with snow. The streams of pumice which fill every ravine extend down to the sea, and the water is covered with this buoyant stone, which drifts sometimes as far as Corsica. Lipari supplies nearly the whole of Europe with pumice.*

Vulcano, to the south of Lipari, from which it is separated by a strait less than a mile across, contrasts strangely with its smiling neighbour. Vulcano, with the exception of a few olives and vines growing on the southern slopes, consists wholly of naked scoriæ, and this circumstance probably led to its being dedicated to Vulcan. Most of its rocks are black or of a reddish hue like iron, but there are

* Area and population of the Liparic Islands:—Lipari, 12·4 square miles, 14,000 inhabitants; Vulcano, 9·7 square miles, 100 inhabitants; Panaria and neighbouring islets, 7·7 square miles, 200 inhabitants; Stromboli, 7·7 square miles, 500 inhabitants; Salina, 10·8 square miles, 4,500 inhabitants; Felicudi, 5·9 square miles, 800 inhabitants; Alicudi, 3 square miles, 300 inhabitants. Total, 57·2 square miles, 18,400 inhabitants.

others which are scarlet, yellow, or white. At the northern extremity of the island rises the Vulcanello, a small cone which appeared above the surface of the sea nobody knows when, and which an isthmus of reddish cinders united about the middle of the thirteenth century to the principal volcano of the island. This central mountain of the island has a crater about 1,800 yards in circumference, from which steam continually escapes. The atmosphere is charged with sulphurous vapours difficult to breathe. From hundreds of small orifices jets of steam make their escape with a throbbing and hissing noise. Some of these fumaroles have a temperature of 610° F. Jets of a lower temperature are met with in other parts of the island, and even at the bottom of the bay. Violent eruptions are rare, and in the eighteenth century only three occurred. The last eruption took place in 1873, after a repose of a hundred years. Until recently the only inhabitants of Vulcano were a few convicts, who collected sulphur and boracic acid, and manufactured a little alum. But an enterprising Scotchman has now taken possession of this grand chemical laboratory. He has built a large manufactory near the port, and a few trees planted around his Moorish residence have somewhat improved the repulsive aspect of the country.

Stromboli, though smaller than either Lipari or Vulcano, is nevertheless more celebrated, on account of its frequent eruptions. For ages back scarcely any mariners have passed this island without seeing its summit in a state of illumination. At intervals of five minutes, or less, the seething lava filling its caldron bubbles up, explosions occur, and steam and stones are ejected. These rhythmical eruptions form a most agreeable sight, for there is no danger about them, and the olive groves of the Stromboliotes have never been injured by a stream of lava. The volcano, however, has its moments of exasperation, and its ashes have frequently been carried to the coast of Calabria, which is more than thirty miles off.

Panaria and the surrounding group of islands between Stromboli and Lipari have undergone many changes, if Dolomieu and Spallanzani are correct in saying that they originally formed only a single island, which was blown into fragments by an eruption having its centre near the present island of Dattilo. A hot spring and an occasional bubbling up of the sea-water prove that the volcanic forces are not yet quite extinct.

As regards the small eastern islands of the archipelago, Salina, Felicudi, and Alicudi, the last of which resembles a tent pitched upon the surface of the water, history furnishes no records of their ever having been in any other than a quiescent state. The island of Ustica, about thirty miles to the north of Palermo, is likewise of volcanic origin, but is not known ever to have had an eruption. It is one of the most dreaded places of exile in Italy. Near it is the uninhabited island of Medico, the ancient Osteodes, where the mercenaries deserted by the Carthaginians were left to die of starvation.

The Ægadian Islands.

Off the western extremity of Sicily lie shallows, sand-banks, and calcareous islands of the same composition as the adjoining mainland. These are the Ægades, or Goat Islands, named after the animals which climb their steep escarpments. Favignana, near which the Romans won the naval victory which terminated the first Punic war, is the largest of these islands. Its steep cliffs abound in caverns, in which heaps of shells, gnawed bones, and stone implements have been found, dating back to the contemporaries of the mammoth and the antediluvian bear. Conflicts between contrary winds are frequent in this labyrinth of rocks and shoals, and the power of the waves is much dreaded. The tides are most irregular,

Fig. 123.—The Mediterranean to the South of Sicily.
Scale 1 : 4,000,000.

and give rise to dangerous eddies. The sudden ebb, locally known as *marubia*, or "tipsy sea" (*mare ubbriaco ?*), has been the cause of many shipwrecks.

Pantellaria.

Pantellaria rises in the very centre of the strait which unites the Western Mediterranean with the Eastern. The island is of volcanic origin, abounds in thermal springs, and, above all, in steam jets. Placed on a great line of navigation, Pantellaria might have become of importance if it had possessed a good harbour like Malta. To judge from certain ruins, the population was more considerable

formerly than it is now. There exist about a thousand odd edifices, called *sesi* by the inhabitants, which are supposed to be ancient dwellings. Like the *nuraghi* of Sardinia, they have the shape of hives, and are built of huge blocks of rock without mortar. Some of them are twenty-five feet high and forty-five feet wide; and Rossi, the archæologist, thinks that they date back to the stone age, for pieces of worked obsidian have been found in them.

From the top of Pantellaria we are able to distinguish the promontories on the Tunisian coast, but though it is nearer to Africa than to Europe, the island nevertheless belongs to the latter continent, as is proved by the configuration of the sea-bottom. This cannot be said of Linosa, an island with four volcanic peaks to the west of Malta, and still less of the Pelagian Islands. The latter, consisting of Lampedusa and a satellite rock called Lampion, owe their names (Lamp-bearer and Lamp) to the light which, legends tell us, was kept burning by a hermit or angel for the benefit of mariners. In our own days this legendary lamp has been superseded by a small lighthouse marking the entrance to the port of Lampedusa, where vessels of three or four hundred tons find a safe shelter.

About the close of the eighteenth century the Russians proposed to establish a military station on Lampedusa to rival that of Malta, but this project was never carried out, and has not been taken up by the Italian Government. The population consists of soldiers, political exiles, criminals, and a few settlers, who speak Maltese.*

Malta and Gozzo.

Malta, though a political dependency of Great Britain, belongs geographically to Italy, for it rises from the same submarine plateau as Sicily. About fifty miles to the east of the island the depth of the sea exceeds 1,500 fathoms, but in the north, in the direction of Sicily, it hardly amounts to eighty, and there can be no doubt that an isthmus formerly united Malta to continental Europe. Geologists are agreed that the land of which Malta and Gozzo are now the only remains must formerly have been of great extent, for amongst the fossils of its most recent limestone rocks have been found the bones of elephants and other animals which only inhabit continents. Even now the island is slowly wasting away, and its steep cliffs, pierced by numerous grottoes, locally known as *ghar*, are gradually crumbling into dust.

Placed in the very centre of the Mediterranean, and possessed of an excellent port, Malta has at all times been a commercial station of much importance. It has been occupied by all the nations who succeeded each other in the possession of the Mediterranean—Phœnicians, Carthaginians, Romans, and Greeks. But long before that time the island must have been inhabited, for we meet with grottoes excavated in the rocks, and with curious edifices resembling the *nuraghi* of Sardinia, and it is just possible that the descendants of these aborigines still

* Pantellaria, 39·7 square miles, 6,000 inhabitants; Linosa, 4·6 square miles, 900 inhabitants; Lampedusa, 3 square miles, 600 inhabitants.

constitute the principal element of the existing population, which, at all events, is very mixed, and during the domination of the Saracens almost became Arab. The language spoken is a very corrupt Italian, containing many Arabic words.

The great military part played by Malta began when the Knights of St. John,

Fig. 124.—The Port of Malta.
Scale 1 : 49,000.

after their expulsion from Rhodes in 1522, installed themselves upon the island, and converted it into the bulwark of the Christian world. In the beginning of this century Malta passed into the possession of the English, who may survey thence, as from a watch-tower, the whole of the Mediterranean, from Gibraltar to Smyrna

LA VALETTA, MALTA.

and Port Said. The excellent port of La Valetta singularly facilitates the military and commercial part which Malta is called upon to play in the world of the Mediterranean. It is sufficiently spacious to shelter two entire fleets, and its approaches are defended by fortifications rendered impregnable by the successive work of three centuries. There are, besides, all the facilities required by merchantmen, including a careening dock larger than any other in the world. The commerce of the island is rapidly increasing; it is one of the great centres of steamboat navigation, and submarine telegraphs connect it with all parts of the world.*

The city of La Valetta has retained all its ancient picturesqueness, in spite of its straight streets and the walls which surround it. Its high white houses, ornamented with balconies and conservatories, rise amphitheatre-like on the slope of a hill; stairs lead from landing-place to landing-place to the summit of this hill; and from every street we behold the blue sea, with its large merchantmen and crowds of smaller vessels. Gondolas, having two huge eyes painted upon the prow, glide noiselessly over the waters, and curious vehicles roll heavily along the quays. Maltese, English soldiers, and sailors of every nation crowd the streets. Now and then a woman glides rapidly along the walls. Like all Christian women of the East, she wears the *faldetta*, a sort of black silk domino, which hides her sumptuous dress, and coquettishly conceals her features.

Malta beyond the walls of the town is but a dreary place of abode. The country rises gently towards the south, in the direction of Citta Vecchia and the hills of Ben Gemma. Grey rocks abound, a fine dust covers the vegetation, and the white walls of the village glisten in the sun. There are no trees, except in a few solitary gardens, where the famous mandarin oranges grow. Nor are there any rivers. The soil is scorched, and it is matter for astonishment that it should yield such abundant harvests of cereals, and clover (*sulla*) growing to the height of a man. Carnation tints delight the eye during the season of flowers. The Maltese peasants, small, wiry, and muscular, are wonderfully industrious. They have brought the whole island under cultivation, the cliffs alone excepted, and, where vegetable soil is wanting, they produce it artificially by triturating the rocks. In former times vessels coming from Sicily were bound to bring a certain quantity of soil as ballast. But in spite of their careful cultivation, the inhabitants of Malta, Gozzo, and Comino (thus named from cumin, which, with cotton, is the principal crop of the island), the produce hardly suffices for six months' consumption, and the islanders are largely dependent upon Sicily for their food. Navigation and the fisheries contribute likewise towards the means of subsistence, but the Maltese would nevertheless perish on their island if the surplus population did not emigrate to all the coast lands of the Mediterranean, and especially to Algeria, where the Maltese, as everywhere else, are distinguished for thrift and industry.

* The tonnage of vessels which enter and clear annually from foreign ports amounts to 4,300,000 tons; the value of dutiable articles imported is nearly £9,000,000 sterling, and the value of the exports about the same.

In winter this exodus is in some measure compensated for by the arrival of many English families, who visit the island for the sake of its dry and mild climate. February is the finest month, and the island is then resplendent with verdure, but the scorching heat of summer soon dries up the vegetation.

A governor appointed by the Crown exercises executive functions, and enjoys the privilege of mercy. He is assisted by a Council of seven members, by whom all laws are discussed and voted. The lord-lieutenant of each district is chosen amongst the Maltese nobles, and deputies appointed by the governor manage the affairs of the villages. Italian is the language used in the courts, with the exception of the Supreme Court, into which English was introduced in 1823.

The revenues of the island, about £170,000 annually, are not sufficient to cover the military expenses, and the deficiency is made up by the imperial treasury.

Most of the inhabitants are Roman Catholics. The bishop is appointed by the Pope, and enjoys an income of £4,000.*

VIII.—Sardinia.

It is a curious fact that an island so fertile as Sardinia, so rich in metals, and so favourably situated in the centre of the Tyrrhenian Sea, should have lagged behind in the race of progress as it has. When the Carthaginians held that island its population was certainly more numerous than it is now, and the fearful massacres placed on record by the historians of Rome testify to this fact. Its decadence was sudden and thorough. In part it may be accounted for by the configuration of the island, which presents steep cliffs towards Italy, whence emigrants might have arrived, whilst its western coast is bounded by marshes and insalubrious swamps. But the principal cause of this torpor, which endured for centuries, is traceable to the actions of man. The conquerors who succeeded the Romans and Byzantines in the possession of the island, whether Saracens, Pisans, Genoese, or Aragonese, monopolized its produce solely with a view to their own profit, and further mischief was wrought by the pirates of Barbary, who frequently descended upon its coasts. As recently as 1815 the Tunisians landed upon Sant' Antioco, massacring the inhabitants, or carrying them into slavery. The coast districts became depopulated, and the inhabitants retired to the interior, where, oppressed by their feudal lords, they led a life of isolation from the rest of Europe. It is hardly a generation since Sardinia began to participate in the general progress made throughout Italy.

Sardinia is nearly as large as Sicily, but has only a fourth of its population.† Geographically it is more independent of Italy than the southern island, and a profound sea, more than 1,000 fathoms in depth, divides it from the African continent. Sardinia with Corsica forms a group of twin islands, which is separated from the Tuscan archipelago by a narrow strait only 170 fathoms in depth.

* Area of Malta, Gozzo, and Comino, 146 square miles; population 149,084, inclusive of 7,309 military and their families.

† Area, 9,440 square miles; population (1871), 636,500.

The geological structure of the two islands is identical, and there can be no doubt that the islands and rocks in the Strait of Bonifacio are the remains of an isthmus

Fig. 125.—The Sea to the South of Sardinia.

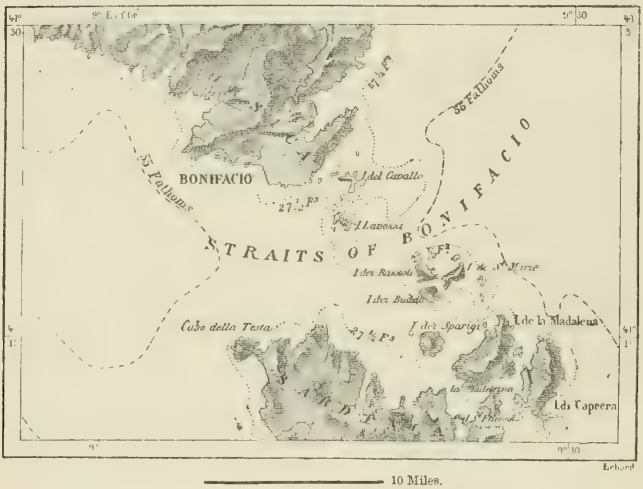
destroyed by the sea. On the other hand, we learn from a study of the geology of Sardinia that at a period not very remote that island must have consisted of several separate islands. The principal island formed a southerly continuation

of the mountains of Corsica, whilst the smaller ones lay to the west. Alluvial deposits, volcanic eruptions, and perhaps, also, an upheaval of the soil, have converted the shallow straits which separated them into dry land.

The mountains of Sardinia may be said to begin with the islands of Maddalena and Caprera, in the Strait of Bonifacio, and in the mountain mass of the Gallura they attain already a considerable height. A depression separates these from the southern portion of the great back-bone of the island, which stretches along the whole of the eastern coast, and terminates abruptly at Cape Carbonaro. These mountains, like those of Corsica, consist of crystalline rocks and schists; but whilst the slope on the latter island is steepest towards the west, the reverse is the case on Sardinia, and that island may almost be said to turn its back upon Italy.

Fig. 126.—The Strait of Bonifacio.

Scale 1 : 500,000.



The general slope of the island is towards the west, and its occupation by Spain could therefore be justified by purely geographical arguments.

The highest summits of the island are found in the central portion of this crystalline chain, where the Gennargentu, or "silver mountain," rises to a height of 6,116 feet. A little snow remains in the crevices of this mountain throughout the summer. The inhabitants of Northern Sardinia formerly imagined that their own Gigantinu, or "giant," in the mountains of Limbarra, constituted the culminating point of the island, but careful measurements have shown that that superb peak only attains an elevation of 4,297 feet.

The secondary mountain groups in the western portion of the island are separated from the main chain by recent geological formations. The granitic

region of La Nurra, to the west of Sassari, almost uninhabited in spite of its fertile valleys, and the island of Asinara adjoining it, which abounds in turtles, are amongst these insulated mountain regions. Another, intersected by the beautiful valley of Domus Novas, occupies the south-western extremity of the island. Geologists look upon it as the most ancient portion of the island, and the plain of Campidano, which now occupies the site of an ancient arm of the sea, is of quaternary formation. The transversal range of Marghine occupies the centre of the island, and there, too, we meet with vast limestone plateaux pierced by volcanic rocks. The ancient craters, however, no longer emit lava, nor even gases, and the villagers have tranquilly built their huts within them. Thermal springs alone indicate the existence of subterranean forces. Volcanic cones of recent age are met with in the north-western portion of the island, as well as in the valley of the Orosei, on the east coast. The trachytic rocks of the islands of San Pietro and Sant' Antioco are of greater age. They sometimes present the appearance of architectural piles, especially at the Cape of Columns, which is, however, rapidly disappearing, as the stone is being quarried to be converted into pavement. On Sant' Antioco, which a bridge joins to the mainland, there are deep caverns, the haunts of thousands of pigeons, which are caught by spreading a net before their entrance.

In addition to the changes wrought by volcanic agencies, Sardinia exhibits traces of a slow upheaval or subsidence due to the expansion or contraction of the upper strata of the earth. Raised beaches have been discovered by La Marmora near Cagliari, at an elevation of 243 and 522 feet above the sea-level, where shells of living species are found together with potsherds and other articles, proving that when this upheaval took place the island was already inhabited. Elsewhere there exist traces of a subsidence, and the old Phœnician cities of Nora, to the south-west of Cagliari, and Tharros, on the northern peninsula of the Gulf of Oristano, have become partly submerged.

Amongst the rivers of the island there is only one which deserves that name. This is the Tirso, or Fiume d'Oristano, which is fed by the snows of the Gennargentu and the rains which descend on the western mountain slopes. Other rivers of equal length are hardly more than torrents, which at one time invade the fields adjoining them, and at another shrink to a thin thread of water meandering between thickets of laurel-trees. Most of the river beds are dry during eight months of the year, and even after rain the water does not find its way into the sea, but is absorbed by the littoral swamps.

All these swamps have brackish water. The largest amongst them communicate freely with the sea, at least during the rainy season, but others are separated from it by a strip of sand. But these, too, are brackish, for the sea-water percolates through the soil, and keeps them at the same level. The water of the inland swamps is likewise saturated with saline substances derived from the surrounding soil. They generally dry up in summer, but the coating of salt which then appears is hardly dry enough to repay the labour of collection and refinement. The only salt marshes actually explored are those of Cagliari and of Carlo-Forte, on San

Pietro. They have been leased to a French company, and yield annually nearly 120,000 tons of salt.

Swamps and marshes envelop nearly the whole of the island in a zone of miasmata, which are carried by the wind into the interior, producing fever even in the more elevated mountain districts. There are localities on the island the air of which no stranger can breathe with impunity. The coast districts of Sardinia, with their stagnant waters, are, in truth, the most unhealthy in Italy, and quite one-fourth of the area of the island is exposed to the scourge of malaria, which sufficiently accounts for the small population of the island and the little progress made.

Even when Sardinia was at the height of its prosperity, and supplied Rome with an abundance of corn, cheese, pork, lead, copper, iron, and textile fabrics, it was noted for its unhealthiness, and the emperors exiled to it those whom they desired to get rid of. Then, as now, the landed proprietors, about the middle of June, retired to the towns, the walls of which offered some protection against the poisonous air. The Italian Government officials are sent to the island as a punishment, and for the most part look upon themselves as condemned to death. Even the native villagers are bound to observe the greatest precautions, and wear garments of skin or leather which are impenetrable to rain, mist, and dew. They are dressed most warmly during the hottest part of the year as a protection against the climate, and in their long *mastrucas* of sheepskin they almost look like Wallachian herdsmen.

Ancient geographers, as well as the Sardinians themselves, ascribe the unhealthiness of the climate to the rarity of north-easterly winds. The mountains of Limbarra, in the north of the island, are popularly supposed to act as a sort of screen, which diverts this health-bringing wind, to the great detriment of Lower Sardinia; and there appears to be much truth in this popular notion. South-westerly winds, or *libeccios*, are almost equally rare, and when they blow they do so with tempestuous violence.

The regular winds of Sardinia blow from the north-west or south-east. The former is known as the *maestrale*, the latter as the *levante* or *sirocco*, called *maledetto levante* by the inhabitants of Southern Sardinia. It becomes charged with moisture during its passage across the Mediterranean, and its temperature is in reality much less than might be supposed from the lassitude produced by it. The maestrale, on the other hand, is hailed with joy, for it is an invigorating wind. On reaching the coast it generally parts with its moisture, and when it arrives at Cagliari it is perfectly dry. The capital of Sardinia is indebted to this wind and to sea breezes for its low temperature (62·4° F.), which is far lower than that of Genoa.

Hurricanes are comparatively rare, and hailstorms, which work such damage elsewhere, are hardly known. Most of the rain falls in autumn; it ceases in December, when the pleasantest season sets in. These are the "halcyon days" of ancient poets, when the sea calms down in order that the sacred bird may build his nest. But these pleasant days are succeeded by a wretched spring. February, the "double-faced month" of Sardinian mariners, brings capricious frosts, to which

succeed, in March and April, abrupt changes of temperature, winds, and rain. Vegetation in consequence is far more backward than might be supposed from the latitude.

The vegetation of Sardinia resembles that of the other islands of the Mediterranean. The forest in the highland valleys of the interior and on the trackless mountain slopes consists of pines, oaks, and holm-oaks, mixed here and there with yoke-elms and maples. The villages are surrounded by chestnut-trees and groves of magnificent walnut-trees. The hill-tops, robbed of their forests, are covered with odoriferous plants and thickets of myrtles, strawberry-trees, and heather. It is there the bees collect the bitter honey so much despised by Horace. Vast tracts of uncultivated land near the seashore are covered with wild olive-trees, which only need grafting to yield excellent fruit. All the fruit trees and useful plants of the Mediterranean flourish in Sardinia. Almond and orange trees, introduced by the Moors at the close of the eleventh century, flourish vigorously. The orange groves of Millis, which are protected by the extinct volcano of Monte Ferru, are, perhaps, the most productive on the shores of the Mediterranean, and in good seasons yield 60,000,000 oranges. The gardens of Domus Novas, Ozieri, and Sassari are of surprising fertility. In the southern part of the island, wherever the cultivated fields gain upon the lands covered with rock-roses, fennel, and lilies, they are fenced in with fig-trees. The fan-shaped foliage of the date-palm is seen near every town, and more especially in the environs of Cagliari. By a curious contrast the dwarf palm is not met with in the southern lowlands of the island, though their climate is almost African, but forms dense thickets in the solitudes of Alghero, in the north of the islands. The inhabitants eat the roots of this tree, as do also the Moors.

Although all the plants of neighbouring countries become easily acclimatized in Sardinia, that island is naturally poorer in species than are continental regions lying under the same latitude. There is nothing special about its flora, for the island is probably only a remnant of a larger tract of land which formerly joined Europe to Africa. As to the famous plant mentioned by ancient writers, which, eaten by mistake, produced fits of "sardonic laughter," or even death, it does not appear to be peculiar to the island. Mimaut thinks, from the descriptions of Pliny and Pausanias, that the large-leafed water-parsley (*Sium latifolium*) is referred to.

The number of species of animals, like that of plants, is smaller in Sardinia than on the neighbouring continent. There are neither bears, badgers, polecats, nor moles. Vipers or venomous serpents of any description do not exist, and the only animal to be dreaded is the tarentula (*arza*, or *argia*), a sting from which can be cured only by dancing until completely exhausted, or by immersion in dung. The ordinary frog, though common in Corsica, does not exist, but European butterflies are numerous. The *mouflon*, which is, perhaps, the ancestor of our domestic sheep, and has been exterminated in nearly all the islands of the Mediterranean, still lives in the mountains of Corsica and Sardinia. Wild horses roamed over Sant' Antioco as recently as the beginning of this century; myriads

of rabbits burrow in the small islands lining the coast; and wild goats with long horns and yellow teeth inhabit the limestone island of Tavolara, in the Gulf of Terranova. These goats are descended from domestic animals abandoned at some former period. Caprera, the residence of Garibaldi, is named after the goats which formerly inhabited it, and animals of that kind recently introduced there quickly returned to a state of nature.

Naturalists have observed that the mammals of Sardinia are smaller than the same species living on the continent. The goat is the only exception to the rule. The stag, deer, wild boar, fox, wild cat, hare, rabbit, marten, and weasel are all of them smaller than the continental varieties. The same rule applies to domesticated animals, with the exception of the pig, which grows to a great size, especially where it is allowed to roam through oak forests. There is a variety of this animal whose hoofs are not cloven, and which ought, therefore, to be classed amongst solipeds. The horses and asses of Sardinia are dwarfs. But the horse is distinguished by great sobriety, sureness of foot, vigour, and endurance. If in addition to these advantages it possessed a more attractive exterior, it would rank among the most highly appreciated horses of Europe. As to the donkeys, though hardly larger than a mastiff, they are brave little animals, and frequently share with their masters the only room of their abode. The old-fashioned mills, resembling in every respect the Roman bas-reliefs which may be seen in the Vatican, are propelled by these donkeys, which thus materially contribute towards the support of their proprietors.

Sardinia abounds more than any other country of Western Europe in prehistoric remains. There are megaliths, known as "giants' stones," "altars," or "long-stones," as in Brittany, scarcely any of them showing traces of the chisel. Dolmens, however, are rare, and the genuineness of all is doubted Amongst these monuments there are, perhaps, some which were connected with the worship of some Eastern deity, for Phœnicians and Carthaginians stayed for a considerable time upon the island, where they founded Caralis, Nora, Tharros, and other towns; and even during the time of the Romans it was customary to place Punic inscriptions upon the tombstones. The ruins of Tharros have yielded golden idols and other articles in large numbers, most of them being of Egyptian origin. But the principal witnesses to the civilisation of the ancient Sards are the curious structures known as *nuraghi*. They generally occupy the hill-tops, and, seen from a distance, resemble pyramids. The limestone plateau of Giara, near the centre of the island, is surrounded by masonry structures of this description, which abound also in other portions of the island, the number still existing being nearly 4,000. They are most numerous in the basaltic region to the south of Macomer, and are met with for the most part in fertile districts, far away from the arid steppes.

The origin and uses of these nuraghi have been a subject of much discussion, but archæologists now almost universally adopt the views of Signor Spano, the indefatigable explorer of Sardinian antiquities. According to him these nuraghi were dwellings, and their Phœnician name simply means "round house." The rudest

among them, dating back probably for forty centuries, contain but a single chamber. They were erected during the age of stone, when man first gave up his cavern dwellings. The more recent constructions date back to the age of bronze, and even of iron. More skill is exhibited in their structure, though no mortar has been used, and they contain two or more chambers, forming as many floors, and accessible by means of stone stairs. The ground floor of some is large enough for the accommodation of forty or fifty persons, and is furnished with antechambers and small semicircular recesses. The nuraghi of Su Domu er S'Oreu, near Domus Novas, which has recently been demolished, contained ten chambers and four courtyards;

Fig. 127.—La Giara

it was a fortress as well as a dwelling-place, capable of accommodating a hundred persons and standing a siege. The dwellings of the modern Albanians and of the Swaneti in the Caucasus still resemble these ancient abodes.

The rubbish which accumulated in these nuraghi has yielded a multitude of objects which throw light upon the daily life of the inhabitants, and bear witness to their relative civilisation. The lower strata only contain hand-made utensils, stone arms, and pottery, but in the upper and more recent layers many articles of bronze have been found. Other monuments of cyclopean structure stand near these ancient dwellings. They are popularly known as "giants' tombs," and Signor

Sapi, who has examined a large number of them, has discovered in every instance the ashes of human beings.

Though very superstitious, the Sardinians have no legends respecting these dwellings of the aborigines, and at most attribute them to the devil. This absence of traditions is no doubt traceable to the almost total annihilation of the inhabitants by successive conquerors. The Carthaginians showed no mercy to the aborigines, and during the first centuries of Roman rule massacres and forcible emigration were the order of the day, and the gaps thus created were filled up by Italian colonists and exiles.

The ancient Sards were most likely Iberians. They are of low stature, and the climate, which has stunted the growth of wild and domesticated animals, appears to have influenced man likewise; but they are well proportioned and muscular, have an abundance of black hair and strong beards, and scarcely ever grow bald. There are minor differences in the Sards of the two provinces. Those of the north have generally oval features and an aquiline nose, whilst those near Cagliari, who are probably more mixed, have irregular features and prominent cheek-bones.

The inhabitants of the interior of the island are, perhaps, of purer race than any other Europeans. Their ancestors, no doubt, were of the most diverse origin, but most invasions which took place after the Roman era stopped short at the coast. The Vandals paid a visit to Sardinia, but all the other Germanic tribes, who ravaged nearly every other country of Western Europe, spared that island, and its inhabitants were thus able to preserve their manners and language. The Moors, Pisans, Genoese, Catalonians, and Spaniards, who successively invaded the island, never penetrated beyond the coast. There is only one exception to this rule, viz. that of the Barbaricini, who inhabit the mountain district of Barbagia, in the very centre of the island, and who are supposed to be the descendants of Berbers expelled from Africa by the Vandals. When they came to the island they were still pagans, and they intermarried with their neighbours, the Ilienses, an aboriginal tribe, pagans like themselves. They were converted to Christianity in the seventh century, and the sombre dress worn by their women reminds us of Barbary.

Of all the idioms derived from the Latin, that spoken in Sardinia has most resemblance to the language of the ancient Romans. More than five hundred words are absolutely identical. There are likewise a few Greek words not met with in any other Latin idiom, as well as two or three words which have no affinity with any other European tongue, and which are, perhaps, derived from the language spoken by the aborigines. The two leading dialects, those of Logoduro, in the north, and of Cagliari, are directly derived from the Latin, and are, perhaps, most nearly related to Spanish. At Sassari, and in some of the neighbouring coast districts, an Italian dialect is spoken which is very much like that of Corsica or Genoa. At Alghero the descendants of the Catalonian immigrants who settled there about the middle of the fourteenth century still speak their old Provençal. The *Maurelli*, or *Maureddus*, in the environs of Iglesias, who are probably Berbers,

and can be recognised by their narrow skulls, make use of a few African words. Maltzan looks upon the inhabitants of the fertile district of Millis as the purest representatives of African immigrants, and it was they who introduced the cultivation of the orange into Sardinia.

The Sardinians of the interior not only retain their ancient language, but likewise many of their ancient customs. Their dances are still the same as in the time of Greece. In the north the steps are regulated by the human voice, the chanters occupying the centre of the ring. In the south a musical instrument, the *launeddi*, is used, which is nothing but an ancient flute, made of two or three reeds. The customs observed at christenings, weddings, and funerals are likewise of remote date. Marriage, as amongst nearly all the ancient inhabitants of Europe, is preceded by a feigned abduction of the bride. The latter, after she has entered the house of her husband, must not stir from her place during that day, nor speak a single word. Mute as a statue, she is no longer a sentient being, but a "thing," the property of her husband. She is not permitted to see her relatives during three days, and in the south many women partly conceal their features.

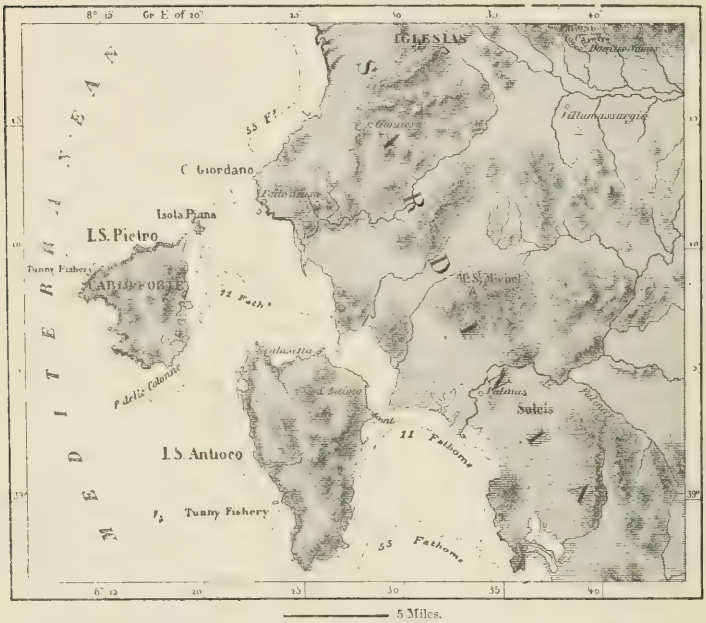
The mountaineers likewise observe the lugubrious ceremony of a wake, called *titia* or *attito*. Women, who are either the friends of the deceased or are engaged for the purpose, penetrate the mortuary chamber, tear their hair, howl, and improvise hymns of mourning. These old pagan ceremonies become truly terrific when the deceased has been the victim of assassination, for in that case the mourners swear to take the life of the murderer. Up to the beginning of this century the practice of the vendetta annually cost the lives of hundreds of young men. At the present day it is confined to the most secluded parts of the island, and in the mountain districts of Nuoro and La Gallura it is customary at christenings to place a few bullets in the swaddling-clothes of the infants, these consecrated bullets being supposed never to miss their mark. Another custom still more barbarous has ceased to be observed since the beginning of the last century. Women, called "finishers" *[illegible]*, were employed to hasten the end of dying persons, a practice which often led to the most atrocious deeds.

The peasant of Sardinia, though not the proprietor of the soil, is nevertheless permitted to enjoy the result of his labour. The feudal system existed up to 1840, and many traces of it still survive. The great barons, most of them of Spanish extraction, were almost the absolute masters of the country, and up to 1836 they administered the law, had their prisons, and erected gallows as a symbol of their power. The peasants, however, were not tied to the land, but could migrate at pleasure, and custom granted them a fair share of the produce of the soil. By virtue of an *adempricia* they were permitted to cut wood in the forests, to pasture their sheep on the hills, and to bring into cultivation the waste lands of the plains. Agriculture was carried on in the most primitive fashion, for the great lords of the land usually resided abroad, and the management of their estates was left to bailiffs. Government has now become the proprietor of most of the unenclosed

land, 80,000 acres of which have been ceded to the Anglo-Italian Company, which has undertaken to provide the island with a network of railways.

In the more densely populated districts the division of the land is exceedingly minute, and this subdivision is still progressing at a most disastrous rate. The nomad herdsmen, on the other hand, possess no land of their own, though, if inclined, they are at liberty to enclose a plot. But vague proprietary rights like these render the careful cultivation of the soil impossible. It has been seriously proposed to expropriate the whole of the land, and to sell it to a few enterprising capitalists, but this would simply amount to a restoration of the old feudal times,

Fig. 128.—District of Iglesias.
Scale 1 : 420,800.



and poverty, which is great even now, would become greater. There are villages in the district of Ogliastra where the peasants eat bread made of the acorns of *Quercus ilex*, the dough being kneaded with water containing a fatty clay. This is, perhaps, the only instance of earth-eating in Europe. The Spaniards, too, eat acorn bread, but they use the fruit of *Quercus ballota*, which is really edible, and are careful not to mix its flour with earth.

The Sardinians, even when they are the owners of pasture-grounds or of fields, never live in the country. Like the Sicilians, they are concentrated in towns or large villages, and neither hamlets nor isolated farmhouses are met with. Even

the shepherds in the mountains build their huts in groups called *stazzi*, and combine for mutual protection into *cussorgie*. Members of these associations, when they lose their cattle from disease or any other cause, may claim one or more beasts from every one of their comrades living within the same district or canton. In other parts of the island—as, for instance, near Iglesias—the produce of the orchards is looked upon as common property. The mountaineers, though poor, practise the ancient virtue of hospitality, and though the dwellings are rude, they find means of making a stranger staying amongst them comfortable.

The products of Sardinia form but a small proportion of those of all Italy. Most of the peasants only work by fits and starts, and hardly more than a fourth of the area of the island has been brought under cultivation. It sometimes happens that the crops are destroyed by the scorching heat of the sun, or eaten up by locusts, which come in swarms from Africa. Except near Sassari no attempt is made to improve the produce. The olive-tree alone is cultivated with some care, for the grower of a certain number of these trees may claim political privileges, and even the title of "Count," and thousands of proprietors have converted their sterile steppes into productive olive groves. The millions of oranges grown in the gardens of Millis and elsewhere are taken entirely for home consumption. Commercially these oranges are of less importance than the saline plants collected in the marshes of the coast districts, and the ashes of which are exported to Marseilles to be converted into soda.

The working of granite and marble quarries yields some profit, but the mines, which were of such importance in the time of the Romans, are hardly touched now. There is only one iron mine, that of San Leone, where work has been carried on seriously by a French company since 1822. It yields about 50,000 tons of ore annually, and the oldest railway of the island connects that mine with Cagliari. The district of Iglesias, where the Romans founded Plumbea and Metalla, and the Pisans searched for silver, has recently regained some of its ancient importance on account of its lead and zinc mines. The waste of the old mines is likewise being scientifically treated by French, English, and Italian companies, to whom mining claims have been ceded, and a curious stalactite cavern which traverses the hill near Domus Novas has been utilised in gaining access to the scoriæ. Iglesias is rapidly growing into a city of modern aspect, the village of Gonessa is already a respectable town, and the little harbour of Porto Scuso, until recently almost deserted, is now crowded with small craft employed in carrying annually 900,000 tons of lead and zinc ore to the roadstead of Carlo-Forte. Unfortunately the miners, especially those from abroad, frequently succumb to the climate.

The fisheries, being for the most part carried on in the bays exposed to the sea breezes, are not attended by the same dangers. Certain portions of the coast abound in fish, such as the Bay of Cagliari, and the narrow arms of the sea in the archipelago of the Maddalena, which the ancients searched for purple shells. Anchovies and "sardines" periodically visit the coasts, and as many as 50,000 tunny-fish are sometimes caught in a single season. The swamps or lagoons likewise yield fish, which are caught in nets spread at the openings of the channels

communicating with the sea. The swamp of Cagliari abounds in shad, that of Oristano in mullets and eels, and that of Alghero in pike and gold fish. The fisheries of Sardinia are consequently of much importance, but most of their profits are reaped by strangers. Corsicans fish near La Maddalena, Genoese around San Pietro, and Italians monopolize the coral fisheries. These latter, too, collect the *Pinna nobilis*, a shell, the silky byssus of which is converted into stuff for garments. Nor do the Sardinians take to the sea as sailors, and the commerce of the island

Fig. 129.—Cagliari, as seen from the Pass of Boneria.

is carried on almost exclusively in Genoese and other Italian vessels. Out of 2,400 proverbs collected by Spano, only three refer to the sea! *

The inhabitants of the northern "Cape" of Sassari, or *di Sopra*, claim to be more intelligent and civilised than those of the southern "Cape" of Cagliari, or *di Sotto*. The former do not call themselves Sardinians at all, but apply that name, which to them is synonymous with barbarians, to the inhabitants of the

* In 1873 11,256 vessels, of 1,08´,000 tons, entered and cleared the five ports of the island. In 1875 2,516 vessels, of 504,756 tons, entered and cleared at Cagliari alone, the increase since 1861 having been nearly 100 per cent.

interior and of the south. In former times these two sections of the population hated each other, and the spirit of the vendetta, which set family against family, village against village, made its influence felt all over the island. This old animosity has not yet completely died out; but the people of Sassari can no longer claim to be the superiors of their southern neighbours. They certainly are better agriculturists and more industrious, but the southerners possess the richest mines, their portion of the island is most productive, and it is the seat of the capital.

Cagliari, the ancient *Caralis*, has remained the great emporium of the island since the days of Carthage. Only a few idols, sepulchral chambers, the ruins of

Fig. 170.—The Port of Terranova.

Scale 1 : 270,000.

an aqueduct, and an amphitheatre excavated in the rock, recall the dominion of Carthaginians and Romans, but it could not be deprived of its excellent harbour and magnificent roadstead. The town was only a short time under the rule of the Moors, but its physiognomy is almost more oriental than that of any city in Europe, many of its houses being provided with cupolas and balconies overhanging the streets. Its position as a place of commerce is most favourable, for it lies on the ocean highway connecting Sicily with the Balearic Islands, and the coast of Africa is within a day's sail. It is sure to prosper, especially if a serious effort is made to drain the marshes and to transform the plain of the Campidano into a fertile garden. The latter, an ancient arm of the sea, extends to the south-east towards Oristano, the "town of potters." During the Middle Ages

the latter was the seat of the most powerful lords of the island, and it was thence Eleonora promulgated her famous *Carta de logu*, which became the public law of the whole island. Oristano has an excellent harbour, sheltered by the peninsula of Tharros, upon which the Phœnicians had founded one of their settlements; its fields are fertile, and, to bring about a return of its ancient prosperity, it is only necessary to drain the marshes which now hem it in. In former times fires were lighted upon the walls of the town during the season of malaria, to purify the atmosphere; but the vast forests from which the fuel for these fires was procured have disappeared, and this portion of Sardinia is no longer entitled to its ancient epithet of "Arborea." It is said that in the marshes of Nurachi, to the north-east of Oristano, may be heard now and then a noise resembling the bellowing of a bull. This noise is probably produced by the passage of air through some subterranean cavern, and similar phenomena have been observed on the coast of Dalmatia.

Sassari the delightful, the rival of Cagliari, is embosomed amidst olive-trees, gardens, and country houses. It alone, of all the towns of the island, could boast of a republican government during the Middle Ages, and the public spirit of its present inhabitants is, perhaps, traceable to this circumstance. Its geographical position, however, is far less favourable than that of Cagliari, for a zone of swamps separates it from the sea. It might export its produce through the port of Alghero or the excellent harbour of Porto Conto, to the south of the mountains of La Nurra; but facility of access has dictated its choice of Porto Torres, a miserable village on the swampy shore of the Gulf of Asinara. Porto Torres occupies the site of a Roman city, and the arches of a huge aqueduct and the columns of a Temple of Fortune still rise above the reeds. This old port certainly offers great facility for the export of the olive oil of Sassari and the wines of Tempio, as respects France and Genoa; but the intricate navigation of the Strait of Bonifacio separates it from the nearest Italian coast. Italy has therefore determined to create an additional port on the east coast of the island, and the Bay of Terranova has been selected for that purpose. *Olbia*, which at the time of the Romans had no less than 150,000 inhabitants, occupied the site of the present town, which the Italians fondly imagine may become the great emporium of the island. Its port is certainly well sheltered, and the roadsteads of the archipelago of La Maddalena near it afford additional accommodation; but seriously to improve the condition of Sardinia it will be necessary, above all things, to drain its dreary swamps, and to "transform their poisonous exhalations into bread."*

IX.—The Present and Future of Italy.

No impartial spectator can deny that Italy, since it has again taken its place among the nations of Europe, promises great things for the future. Even its

* Population of the principal towns of Sardinia (1871):—Cagliari, 31,9 5; Sassari, 30,542; Alghero, 8,769; Ozieri, 7,965; Iglesias, 7,191; Oristano, 6,963; Terranova, 1,976.

political regeneration has brought to the surface men of the highest intellect, courage, zeal, and public spirit. There are some amongst them whom posterity will look upon as a credit to all mankind. Possibly this period of excitement and nervous activity may be succeeded by a sort of moral collapse, such as generally takes place after every great crisis in the life of a nation. But this need not render us anxious for the future, for generations exhausted by the efforts they have made will be succeeded by others eager to continue the work their predecessors have begun.

In sciences and arts the native country of Volta, Cialdi, Secchi, Rossini, Verdi, and Vela occupies even now a position of equality with the most advanced nations of Europe. The Italian of the present day is able to refer without shame to the two great centuries of the Renaissance, for he has entered upon a second period of regeneration, and the names of contemporaries can be mentioned by the side of the great names of the past. Italy has its skilful painters and sculptors, its celebrated architects and unrivalled musicians. The great works achieved by its engineers are deserving the study of foreigners. Amongst its physicists, geologists, astronomers, and mathematicians there are some of the brightest ornaments of the age, and the assiduity with which universities are frequented insures their having worthy successors. A geographical society only recently established has successfully taken up the work of exploration so gloriously carried on by the Genoese and Venetians. It is not just, therefore, to say ironically that "Italy has been made, but not Italians." Individually the Italians are inferior to no other race of Europe, and the reorganization of the country would have been impossible had there been any deficiency in men of mark.

Italy is more densely inhabited than any other of the great states of Europe, in spite of vast extents of almost uninhabitable mountain tracts and swamps. The population, however, increases less rapidly than in Russia, England, or Germany. It doubles in about a century, whilst that of Russia doubles in fifty, and that of France in two hundred years. Italy thus occupies an intermediate position. In Apulia and Calabria, which are amongst the poorest provinces, the birth rate is highest, whilst in the wealthy Marches and Umbria it is lowest. On an average the Italian dies when he is thirty-two, and his life is consequently much shorter than that of the average Frenchman or Englishman.

Agriculture and the development of the natural resources of the soil and the sea engage much more attention than industry properly so called. Nearly fifty per cent. of the total area is under cultivation. The cereals raised do not suffice for the wants of the inhabitants, but other products are exported in considerable quantities. In its production of oil Italy holds a foremost rank as regards quantity, but not always with respect to quality. The amount of fruit grown, such as figs, grapes, almonds, and oranges, is greater than in any other country of Europe. The chestnut forests in the Apennines and Alps yield rich harvests. Its mulberry plantations are four times more extensive than those of France, and the raw silk produced in favourable years exceeds in quantity that exported from China. The peninsula is still entitled to its ancient epithet of

Œnotria (wine land), but, apart from certain districts of continental Italy and Sicily, the quality of wine produced, owing to carelessness on the part of the growers, is inferior to what it is in France. The cultivation of cotton is comparatively of small importance. The breeding of animals yields large profits, and Italy is noted throughout Europe for the quality of some kinds of cheese.*

The working of the iron mines of Elba, the quarrying of marble and granite in the Alps and Apuanic Alps, the extraction of borax and boracic acid in the Tuscan Sub-Apennines, the mining for lead and zinc in Sardinia, and for sulphur in Sicily,† lead up to industrial pursuits properly so called. These latter extend nearly to everything, from the manufacture of pins to the construction of steam-engines and ships. Italy, however, is eminent only in the production of certain articles *de luxe*, such as straw bonnets, cameos, coral jewellery, glass, and in the preparation of macaroni and other farinaceous pastes. The manufacture of silk, however, has taken a rapid development in recent years, and Milan has become a dangerous rival of Lyons. In the province of Novara, and more especially at Biella, there are hundreds of woollen factories. The cotton manufacture is not of much importance, and linen-weaving is for the most part carried on as a domestic industry. Italy, in fact, cannot yet be called a manufacturing country. The number of workmen is large, but they mostly labour at home or in small workshops,‡ and a division of labour, such as exists in England, France, or Germany, is hardly known. Manufactories, however, are rapidly increasing, and economical conditions are gradually becoming what they are already in most other countries of Europe.

Italy possesses a powerful mercantile marine, manned by 150,000 seamen; but its foreign commerce is far less than might have been expected from its tonnage.§ Most of the vessels are engaged in the coasting trade. The first Italian vessel was seen in the Pacific in 1847, and even now the Italian flag is very inadequately represented in the navigation of the great oceans. Italian patriots are anxious to see the commerce of the country extended to the most distant regions. For the present Italy enjoys a sort of monopoly in the Mediterranean, and any increase of

* Agricultural statistics of Italy, 1869 (according to Maestri):—*Distribution of Area*:—Fields, vineyards, and orchards, 27,267,360 acres; olive plantations, 1,371,400 acres; chestnut plantations, 1,445,000 acres; forests, 10,240,400 acres; meadows, 2,900,000 acres; pastures, 13,337,000 acres. *Annual Produce*:—Cereals, 203,300,000 bushels (value £84,000,000); potatoes, 27,500,000 bushels (£2,000,000); wines, 880,000,000 gallons (£44,000,000); raw silk, 6,889,437 lbs. in 1873, 6,305,214 lbs. in 1874; tobacco, 7,235,000 lbs.; oil, 3,747,850 lbs. (£8,800,000); chestnuts, 14,860,000 bushels. *Domesticated Animals* (1868):—1,196,128 horses, 3,489,125 heads of cattle, 8,674,527 sheep and goats, 1,553,582 pigs.

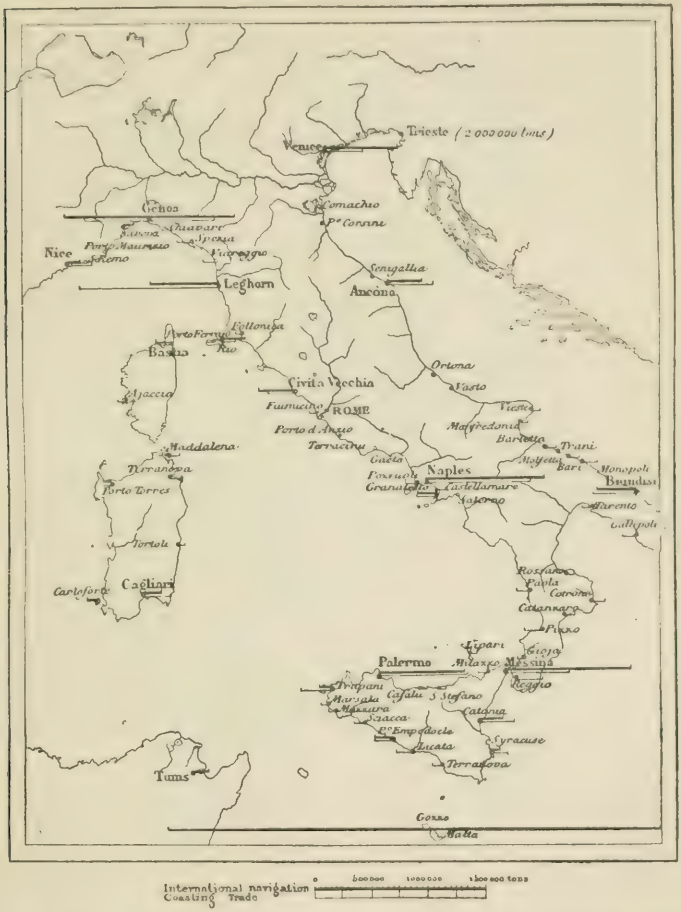
† Annual mineral produce of Italy (in tons):—Iron, 85,000; copper, 13,000; lead, 32,250; zinc, 30,000; coal, 110,750; sulphur, 285,611; salt, 388,000; besides small quantities of silver, nickel, mercury, &c.

‡ *Occupations*:—Amongst every 1,000 inhabitants there are 342 agriculturists; 163 miners and artisans; 29 commercial men; 23 artists and scientific men; 7 priests; 6 officials; 1 soldier; 31 "proprietors;" 21 domestic servants; 13 paupers; and 382 without occupation.

§ In 1874 there were 10,929 vessels (including 138 steamers), of a burden of 1,031,889 tons; 37,560 vessels, of 7,580,317 tons, entered from or cleared for foreign ports; 197,896 vessels, of 16,500,000 tons, entered and cleared in the home trade. Of every 1,000 tons engaged in the foreign commerce, 368 sailed under the Italian, 266 under the English, and 173 under the French flag. The commerce with France engaged 1,779,672 tons; that with England 1,388,300 tons; and that with Austria 998,740 tons.

population or wealth in Northern Africa must prove of immediate advantage to it. But there can be no doubt that the proposed railway from Antwerp or Calais to Saloniki or Constantinople will seriously affect the transit trade of Italian ports. Nor are Italian shipowners able to compete with their rivals of Marseilles or Trieste when it is a question of speed, for the number of their steamers is very small.

Fig. 131. - Navigation of Italy.



The facilities for carrying on coasting trade have, in some measure, interfered with the development of the inland trade of the country. The construction of railways, however, is gradually bringing about a change. Already five lines of

rails cross the Apennines, others are projected, and one of the Italian railways, namely, that which pierces the Alps in the tunnel of Mont Cenis, and finally follows the eastern coast to Rimini, has become a portion of the great European

Fig. 132.—Routes of Commerce of Italy.
Scale 1 : 6,000,000.

highway to India. Nor must the political importance of these railways be underrated, for they knit together the most distant provinces of Italy, and make the country really one.*

* In 1876 4,791 miles of railway had been opened for traffic, and 460 miles were building. There were also 1,858 miles of canals and navigable rivers, and 77,140 miles of public roads.

The commerce of Italy has increased rapidly of late, but it is still inferior not only to that of England, France, Germany, Austria, and Russia, but likewise to that of much smaller countries, like Belgium and the Netherlands. In 1875 the imports, including transit, were estimated at £48,614,280, the exports at £42,301,800. France participates in this commerce to the extent of 31 per cent., England is represented by 23, Austria by 20, and all the other countries of the world share in the remainder. Recently the commerce with North and South America has assumed considerable proportions, and efforts are being made to obtain a footing in Eastern Asia.

The great scourge of Italy consists in the poverty of its peasantry even in the most fertile provinces, as in Lombardy and the Basilicata. These peasants live in foul hovels, and the united earnings of a whole family are hardly sufficient to procure bread. Chestnuts, and a polenta of maize and paste made of damaged flour, are the principal articles of food, and nothing is left for luxuries, or even comfortable clothing. Rickets and other diseases brought about by an insufficiency of food are common, and, in fact, mortality is very great. Emigration is under these circumstances of immense advantage to the country, for the thousands of Italians who seek work or found new homes in South America, the United States, France, Turkey, Egypt, and elsewhere, not only earn their bread, but also render some assistance to those of their relatives who remain behind. It is said that out of 500,000 Italians living abroad, no less than 100,000 are engaged in art, either as painters, sculptors, or musicians, the latter being frequently mere street-singers or organ-grinders.

Ignorance, the usual companion of poverty, is still very great throughout the peninsula. We might err in condemning the Italians because of their ignorance of the arts of reading and writing, for, as the heirs of an ancient civilisation, they are more polished in their manners than the educated peasants of the North. Still this ignorance is most deplorable, for it precludes all progress. Nearly two-thirds of the population over ten years of age are unable to read, and fifty-nine men and seventy-eight women out of every hundred are unable to sign the marriage registers. There are several thousand parishes without elementary schools, and the number of pupils, instead of amounting to the normal proportion of one to every six or seven inhabitants, is only one to about eleven.* Education, however, is making fair progress, but its influence upon the diminution of crimes of violence has hitherto been small. In 1874 Signor Cantelli, the Home Secretary, stated that there occurred annually 3,000 homicides, 4,000 cases of highway robbery, and 30,000 violent assaults.

The permanent confusion of the finances of Italy, attended as it is by heavy and vexatious taxes, must be looked upon as one of the principal causes which retard the development of the country. The national debt may appear a small matter if we compare it with that of France, but it has been raised in the course

* *Public Schools* 1875:—58,522 elementary and evening schools, 2,271,999 pupils; 1,082 superior schools, 64,044 pupils; 21 universities, 10,000 students; 651 professional, technical, and art schools, 33,311 students. Total, 60,076 schools, &c., with 2,382,354 pupils and students.

of a single generation, and is augmenting from year to year. The revenue increases, but the expenditure does so likewise, and the additional income resulting from an increase of taxation and the sales of Church property is not sufficient to cover the deficiency. The heavy cost of the army, an absence of sustained efforts in carrying on public works, waste and fraud by public servants, have hitherto prevented the establishment of a balance between income and expenditure, and the paper money issued by Government is nowhere accepted at its nominal value.

This disorganization of the finances places Italy at the mercy of foreigners, and the arrangements which have to be made from time to time with foreign capitalists are not always of a purely financial nature. The inefficiency of her military and naval organization, moreover, compels her to cultivate foreign alliances as expediency may direct, and to these alliances Italy is, in a large measure, indebted for her political unity.*

Nor is this unity even now as perfect as could be desired. The Pope has been deprived of his temporal power; he resides at the Vatican as a guest; and the money offered him by the Italian Government, but which has never been accepted, is not tribute, but a gratuity. But, in spite of this, the Pope is still a real power, and his very presence interferes substantially with the permanent establishment of the state. The Catholics of the world have not yet acquiesced in his disestablishment, and they allow no opportunity for attacking the new order of things to escape them. Political Europe is consequently much interested in the home affairs of Italy, and feels tempted frequently to intervene. The most expert diplomacy may not be able to avert this danger, and if there is a struggle it will certainly not be confined to the peninsula.

In the end Italy will no doubt escape from the anomalous position of having for her capital a city which is the seat of a theocratic government claiming the allegiance of the Roman Catholics of the entire world. The geographical conditions of no other country are equally favourable to the development of national sentiments and the maintenance of a national individuality. At the same time the well-defined boundaries of the country deprive it of all force of expansion. Italy will never play a great part beyond the bounds of the Mediterranean, and though Italian may obtain a certain preponderance in Tunis, Egypt, and the Levant, the noble language of Dante has no chance, as regards universality, when opposed to English, French, Spanish, German, or Russian.

X.—Government and Administration.

The charter promulgated in March, 1848, declares the old kingdom of Sardinia to be an hereditary constitutional monarchy. It has gradually been

	1861.	1873.	1875.
* Expenditure	£24,206,920	£61,704,000	£56,618,600
Revenue	£18,332,880	£52,384,000	£55,499,800
Deficit	£5,874,040	£9,340,000	£1,118,800
National Debt . . .	£100,000,000	£402,400,000	£460,000,000

extended to the other portions of the peninsula. Like most similar documents, it guarantees equality before the law, personal liberty, and inviolability of the domicile. The press is free, "subject to a law repressing its abuses;" the right of meeting is recognised, "but not in the case of places open to the general public;" and all citizens are promised the enjoyment of equal civil and political rights, "except in those cases which shall be determined by law."

The executive is intrusted to the King, but no law or act of government is valid unless countersigned by a minister. The King, as such, is commander of the naval and military forces, he concludes all treaties, and the assent of the Chambers is only required if they concern cessions of territory, or entail an expenditure of public money. All Government officials are appointed by the King, he may dissolve the Chamber of Deputies, justice is administered in his name, and he possesses the right of pardon. He enjoys the fruits of the Crown lands, and may dispose of his private property without reference to the general laws of the country. The civil list of the King and the members of his family annually exceeds £800,000!

Senators are appointed by the King from amongst ecclesiastical, military, and civil functionaries, persons of wealth, and men who have deserved well of the country. Their number is not limited, and they must be forty years of age. Deputies are elected for five years. They must be thirty years of age. Neither senators nor deputies are in receipt of emoluments, and this may explain the little zeal they exhibit in the performance of their public duties. A quorum, consisting of one-half the members of each house *plus* one, is frequently unattainable for weeks.

The franchise is enjoyed by professors of universities and colleges, civil servants, knights of orders of chivalry, members of the liberal professions, merchants, persons who have an income of £24 from money invested in Government securities, and all others twenty-five years of age, able to read and write, and paying 32s. in taxes. The number of electors is about 400,000, but hardly one-half of them ever go to the poll.

Each province occupies the position of a "corporation," which may hold property, and enjoys a certain amount of self-government. The "Provincial Councils" consist of from twenty to sixty members, who are chosen by the municipal electors for five years. These Councils usually occupy themselves with the material interests of the province, and, when not sitting, are represented by a "Deputation" charged with controlling the acts of the prefect.

The municipal organization is very similar to that of the provinces. The Councils are elected for five years: all males of twenty-one years of age paying from 4s. to 20s. in taxes (according to the importance of the municipality), professors, civil servants, members of liberal professions, and soldiers who have been decorated are in the enjoyment of the franchise. The Council meets twice a year, and its sittings are held in public if a majority demands it. It appoints a municipal *giunta* of from two to twelve members, charged with the conduct of current affairs. The mayors, like the provincial prefects, are

appointed by Government, but must be chosen from the members of the Municipal Council.

The great territorial divisions of the kingdom (see p. 362) consist of 69 provinces and 284 circles (*circondarii*), or districts. These latter again are subdivided into 1,779 judicial districts (*mandamenti*) and 8,360 communes. The central Government is represented in the provinces by a prefect, in the districts by a sub-prefect, and in the communes by a mayor, or *sindaco*. This system of administration is very much like that existing in modern France.

The administration of justice was organized in 1865. In each commune there is a "Conciliator," appointed for three years by Government, on the presentation of the Municipal Council. A "Pretor" administers justice at the capital of each of the judicial districts: he is assisted by one or more Vice-pretors. Next follow 161 civil and correctional courts, 92 assize courts, 24 courts of appeal, 25 commercial tribunals, and 4 courts of cassation; the latter at Florence, Naples, Palermo, and Turin. The Code of Laws is an adaptation of the Code Napoléon, and breathes the same spirit.

In military matters Prussia has served as a model. Every Italian, on attaining his twenty-first year, becomes liable to serve in the army or navy. Men embodied in the first category of the standing army (*Esercito permanente*) remain from three to five years under the colours, according to the arm to which they belong, and six to seven years on furlough. The men of the second category, or reserve of the standing army, drill fifty days, and are then dismissed to their homes. The "mobilised militia" includes all men up to forty not belonging to the standing army. A "levy en masse," or *Milizia stanziole*, is provided for by law, but nothing has been done hitherto to render it a reality. The standing army includes 90 regiments of infantry, 20 regiments of cavalry, 14 of artillery, and 1 of engineers, and numbers 410,000 men; the reserve amounts to 180,000 men; the mobilised militia (247 battalions, 24 Alpine companies, 60 batteries, and 10 companies of engineers), 277,000, and 234,000 officers and men are stated to be under the colours. The four great fortresses of the north are Verona, Mantua, Peschiera, and Legnago. These form the famous "Quadrilateral." Venice is likewise a place of great strength, and made an heroic defence in 1849. Palmanova defends the frontier between the Julian Alps and the Gulf of Trieste. Rocca d'Anfo, on an isolated rock to the north of Lake Garda, commands the defiles of the Adige and Chiese. Pizzighettone, on the Adda, is no longer of much importance, now that Italy has acquired possession of the Quadrilateral; but Alessandria, at the confluence of the Tanaro and Bormida, will always retain its rank as the great strategical centre of Piemont, and one of the strongest places of Europe. Casale may be looked upon as one of its outworks, and together with Genoa defends the passages of the Apennines. Piacenza and Ferrara command important passages of the Po. The other fortresses of Italy are Ancona in the centre; Porto Ferrajo in Elba; Gaeta, Capua, and Taranto in the south; and Messina in Sicily.

The navy consists of 21 ironclads (179 guns, engines of 11,310 horse-power, 76,842 tons) and 51 wooden steamers, manned by 20,000 seamen. The great

naval arsenals and stations are at Spezia, Genoa, Naples, Castellamare di Stabbia, Venice, Ancona, and Taranto.

The Roman Catholic Church alone is acknowledged by the State, but all other religions are tolerated. The conflict between Church and State is favourable to the spread of Protestantism; but, apart from the Waldenses and a few foreigners in the larger towns, there are no Protestants in Italy. Many of those, however, who are nominally Catholics have ranged themselves amongst the enemies of their Church, or are perfectly indifferent.

Italy occupies quite a special position in the world, owing to its being the seat of the Papacy. Rome is the seat of two governments, viz. that of the King and of the Sovereign Pontiff. The latter, though shorn of his temporal power, is in principle one of the most absolute monarchs. Once elected Vicar of Jesus Christ by the cardinals met in conclave, he is responsible to no one for his actions, though it is customary for him to listen to the advice of the Sacred College of Cardinals before deciding questions of importance. The Pope alone, of all men, is infallible; he can efface the crimes of others, "bind and unbind," and holds the keys of heaven and hell, his power extending thus beyond the span of man's natural life.

The cardinals are the great dignitaries of this spiritual government. They are created by the Pope. Their number is limited to 70, viz. 6 Cardinal Bishops (who reside at Rome), 50 Cardinal Priests, and 14 Cardinal Deacons. The Cardinal *Camerlengo* represents the temporal authority of the Holy See, and on the death of a pope he takes charge of the Vatican and of the Fisherman's Key, which is the symbol of the power bestowed upon St. Peter and his successors. In special cases the cardinals of the three orders may be convoked to an Œcumenical Council. On the death of a pope the cardinals elect his successor, who must be fifty-five years of age, and obtain two-thirds of the votes. His investment with the pallium and tiara, however, only takes place after the assent of the Governments of France, Spain, Austria, and Naples (now represented by Italy) has been secured.

In virtue of the formula of "A free Church in a free State," so frequently repeated since Cavour, the Pope is permitted to enjoy sovereign rights. He convokes councils and chapters, appoints all ecclesiastical officers, has his own post-office and telegraph, his guard of nobles and of Swiss, pays no taxes, and enjoys in perpetuity the palaces of the Vatican and Lateran, as well as the villa of Castel-Gandolfo, on the Lake of Albano. In addition to this, he has been voted by the Italian Parliament an annual "dotation" of £129,000. This grant, however, he has not touched hitherto, but the "Peter's pence," collected by the faithful in all parts of the world, amount to more than double that sum.

Italy is divided into 47 archiepiscopal and 206 episcopal sees. There are more than 100,000 secular priests, and in 1866, when the monasteries and convents were suppressed, their inmates receiving pensions from Government, there were 32,000 monks and 44,000 nuns. The ecclesiastical army consequently numbers 176,000 souls, and is nearly as numerous as the military force on a peace footing.

The following table exhibits the area and population (estimated for 1875) of great territorial divisions of Italy :—

	Area. Square miles.	Population.		Area. Square miles.	Population.
Piemont . . .	11,301	2,995,213	Abruzzos—Molise	6,676	1,302,966
Liguria . . .	2,056	865,254	Campania . . .	6,941	2,807,450
Lombardy . .	9,084	3,553,913	Apulia (Puglia) .	8,539	1,464,604
Venetia (Venezia)	9,060	2,733,406	Basilicata . . .	4,122	517,069
Emilia	7,921	2,153,381	Calabria	6,663	1,229,614
Umbria . . .	3,720	563,582	Sicily	11,290	2,698,672
Marches . . .	3,748	930,712	Sardinia . . .	9,398	654,132
Tuscany . . .	9,287	2,172,832	Total . . .	114,407	27,482,174
Rome (Latium) .	4,601	839,074			

CORSICA.*

CORSICA, with Sardinia, forms a world apart. At a remote epoch these two islands were but one, and it is curious to find that Corsica, which politically now forms part of France, is geographically as well as historically much more Italian than its sister island. A glance at a map is sufficient to convince us that Corsica is a dependency of Italy, for while abyssal depths of more than 500 fathoms separate it from Provence, it is joined to the coast of Tuscany by a submarine plateau, the mountains of which rise above the surface of the waters as islands. The climate and natural productions of the island are those of Italy, and the language of its inhabitants is Italian. Purchased from the Genoese, then conquered by main force, Corsica in the end voluntarily united its destinies with those of France. It has now been connected for more than three generations with the latter, and there can be no doubt that most of its citizens look upon themselves as Frenchmen.

Though only half the size of Sardinia, Corsica is nevertheless larger than an average French department. The fourth island in size of the Mediterranean, it follows next to Cyprus, but is far more important than that island, and only yields to Sicily and Sardinia in wealth and population.† It is a country of great natural beauty. Its mountains, attaining an altitude of over 8,000 feet, remain covered with snow during half the year, and the view from the summits embraces nearly the whole of the island, its barren rocks, forests, and cultivated fields. Most of the valleys abound in running water, and cascades glitter in all directions. Old Genoese towers, standing upon promontories, formerly defended the entrance to every bay exposed to incursions of the Saracens, but they are hardly more nowadays than embellishments of the landscape.

Monte Cinto, the culminating point of the island, does not pierce the region of

* *Authorities:*—Marmocchi, "Géographie de la Corse;" Gregorovius, "Corsica;" Pr. Mérimée, "Voyage en Corse."

† Area of Corsica, 3,378 square miles; length from north to south, 114 miles; width, 52 miles; development of coast-line, 300 miles.

persistent snows. A huge citadel of granite, whose fastnesses afforded a shelter to the Corsicans during their wars of independence, it rises in the north-western portion of the island. From its summit we can trace the whole of the coast from the French Alps to the Apennines of Tuscany. There are other peaks to the north and south of it which almost rival it in height.* This main chain of the island consists throughout of crystalline rock. Transverse ridges connect it with a parallel range of limestone mountains on the east, which extend northward through the whole of the peninsula of Bastia, and shut in, farther south, the old lake basin of Corte, now drained by the Golo, Tavignano, and other rivers. The whole of the interior of Corsica may be described as a labyrinth of mountains, and

Fig. 133.—Submarine Plateau between Corsica and Tuscany.
Scale 1 : 1,850,000.

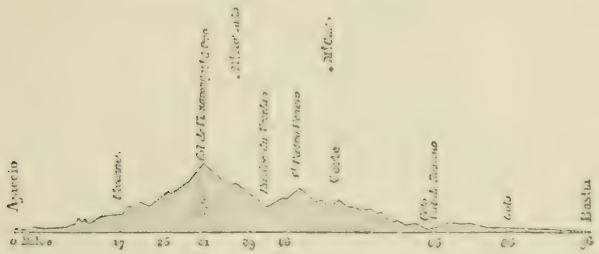
in order to pass from village to village it is necessary to climb up steep steps, or *scale*, and to ascend from the region of olives to that of pasturage. The high-road which joins Ajaccio to Bastia has to climb a pass 3,793 feet in height (Fig. 134), and even the road following the populous western coast ascends and descends continuously, in order to avoid the promontories descending steeply into the sea. These physical obstacles sufficiently explain why railways have not yet been built.

The western coast of the island is indented by numerous gulfs and bays, which resemble ancient fiords partly filled up by alluvial sediment. On the eastern coast,

* From north to south:—Monte Padro, 7,846 feet; Monte Cinto, 8,878 feet; Paglia Orba, 8,283 feet; Rotondo, 8,607 feet; Monte d'Oro, 7,890 feet; Incudine, 6,746 feet.

which faces Italy, the slopes are more gentle; the rivers are larger and more tranquil, though not one of them is navigable; and the ground is more level. This portion of the island is known as *Banda di Dentro*, or "inner zone," in distinction from the *Banda di Fuori*, or "exterior (western) zone." The eastern coast appears to have been upheaved during a comparatively recent epoch, and ancient gulfs of the sea have been converted into lagoons and swamps, quite as dangerous from their miasmatic exhalations as those of the sister island. If we add that the mountains in the west obstruct the passage of the vivifying mistral, that the heat in summer is great, and droughts frequent, we have said enough to account for the insalubrity of the climate.* The maritime basin between Corsica and Italy is almost shut in by mountains, and purifying breezes are rare there. Between Bastia and Porto-Vecchio not a single town or village is met with on the coast, and in the beginning of July the peasantry retire to the hills in order to escape the fever. Only a few guards and the unfortunate convicts shut up in the penitentiary of Casabianca remain behind. Nothing more melancholy can be imagined

Fig. 134.—Profile of the Road from Ajaccio to Bastia.



than these fertile fields deserted by their inhabitants. Plantations of eucalyptus have been made recently with a view to the amelioration of the climate.

Owing to the great height of the mountains we are able to trace in Corsica distinct zones of vegetation. Up to a moderate height the character of the vegetation is sub-tropical, and resembles that of Sicily or Southern Spain. There are districts which can be numbered amongst the most fertile of the Mediterranean. One of these is the *Campo dell'Oro*, or "field of gold," around Ajaccio, where hedges of tree-like cacti separate the gardens and orchards; such, also, is the country to the north of Bastia, with its aromatic flowers and luscious fruits. Olive forests generally cover the lower hills, their silvery foliage contrasting with the sombre verdure of the chestnut woods above. Balagna, near Calvi, on the north-western coast of the island, is famous for its olives, whilst another valley, on the opposite side of the island, near Bastia, can boast of the most magnificent chestnut-trees. Chestnuts, in some parts, constitute the principal article of food,

* Mean annual temperature at Bastia, 66·7 F.; rainfall, 23 inches.

and enable the inhabitants, who are by no means distinguished for their industry, to dispense with the cultivation of cereals. Some political economists have actually proposed to fell these trees, in order that the inhabitants may be forced to work.

Chestnut-trees grow up to a height of 6,250 feet. The virgin forests which formerly extended beyond them to the zone of pasturage have for the most part disappeared. In the upper Balagna valley, Valdoniello, and Aitone, however, magnificent forests may still be seen, and a larch (*Pinus altissimus*), the finest conifer of all Europe, attains there a height of 160 feet. These splendid trees, unfortunately, are rapidly disappearing. They are being converted into masts, or sawn into staves and planks.

The pasturing grounds above these forests are frequented during summer by herdsmen with their flocks of sheep and goats. The agile moufflon is still met with there in a few rocky recesses, and the shepherds assert that wild boars, though very numerous on the island, carefully avoid its haunts. The wolf is unknown in the island, and the bear has disappeared for more than a century. Foxes of large size and small deer complete the fauna of the forest region of Corsica. The *malmignata* spider, whose bite is sometimes mortal, is probably of the same species as that of Sardinia and Tuscany; the *tarentula* is the same as that of Naples, but the venomous ant known as *innafantato* appears to be peculiar to the island.

We know nothing about the origin of the aboriginal inhabitants of Corsica. There are neither nuraghi, as in Sardinia, nor other antiquities enabling us to form an opinion with respect to their manners. But there exist near Sartène and elsewhere several dolmens, or *stazzone*, menhirs, or *stantare*, and even avenues of stones, which are similar in all respects to those of Brittany and England. We may assume, therefore, that these countries were formerly inhabited by the same race.

The inhabitants of Corte, in the interior of the island, and the mountaineers of Bastelica, boast of being Corsicans of the purest blood. At Bastia the type is altogether Italian, but as we travel into the interior we meet men with large fleshy faces, small noses devoid of character, clear complexion, and eyes of a chestnut colour rather than black. Phocæans, Romans, and Saracens, who maintained themselves here until the eleventh century, were succeeded by Italians and French. Calvi and Bonifacio were Genoese settlements, and at Carghese, near Ajaccio, we even meet with a colony of Greek Mainotes, who settled there in the seventeenth century, and whose descendants now speak Greek, Italian, and French. But, in spite of these foreign immigrations, the Corsicans have in a large measure retained their homogeneity. Paoli was rather proud of a Genoese proverb, which said that the "Corsicans deserved to be hanged, but knew how to bear it." History bears, indeed, witness to their patriotism, fearlessness, and respect for truth; but it also tells us of foolish ambitions, jealousies, and a furious spirit of revenge. Even in the middle of last century the practice of the vendetta cost a thousand lives

annually. Entire villages were depopulated, and in many parts every peasant's house was converted into a fortress, where the men were constantly on the alert, the women, protected by custom against outrage, sallying forth alone to cultivate the fields. The ceremonies observed when a victim of the vendetta was brought home were terrible. The women gathered round the corpse, and one amongst them, in most cases a sister of the deceased, furiously called down vengeance upon the head of the murderer. The *voceri* of death are amongst the finest national songs. Foreign domination is to blame, no doubt, for the frequency of these assassinations. The judges sent to the country did not enjoy the confidence of the inhabitants, and these latter returned to the primitive law of retaliation.

Though Corsica gave a master to France, the spirit of the people is essentially republican. The Romans barely succeeded in enslaving it, and even in the tenth century the greater portion of the island formed a confederation of independent communities known as *Terra del Commune*. The inhabitants of each valley formed a *pieve* (*plebs*), by whom were elected a *podesta* and the "fathers of the commune." These latter appointed a "corporal," who was charged with the defence of popular rights. The podestas in turn elected a Council of twelve, who stood at the head of the confederation. This constitution survived conquest and invasion. In the eighteenth century, when fighting heroically against Genoa and France, Corsica declared all citizens equal. It was institutions like these which made Rousseau say that "that little island would one day astonish Europe." Since that time the Napoleonic era has whetted the ambition of the Corsicans, and they appear to have forgotten their traditions of freedom.

Corsica is one of the least-populated departments of France.* The eastern slope of the island, though more fertile and extensive than the western, and formerly densely peopled, is now almost a desert. The Roman colony of Mariana no longer exists, and the Phocæan emporium of Aleria has dwindled down since the thirteenth century into an isolated homestead standing close to a pestiferous swamp. At the present time the great centres of population are on the western coast, which faces France, enjoys a salubrious climate, and possesses magnificent ports.

The Corsicans certainly appear to deserve the charge of idleness which is brought against them, for they have done but little to develop the great resources of their island. Fishing and cattle-breeding they understand best. In many parts agricultural operations are carried on almost exclusively with the help of Italian labourers, known as Lucchesi, because most of them formerly came from Lucca. Thanks, however, to the impulse given by France, a commencement has been made in the cultivation of the soil, and olive oil, equal to the best of Provence, wine, and dried fruits already constitute important articles of export.†

Corsica abounds in ores, but they do not appear to be as rich as those of Sardinia. Formerly iron mines alone were worked, the ore being conveyed to the

* Area, 3,378 square miles; population in 1740, 120,380; in 1872, 259,861.

† *Average annual produce*:—Cereals, 2,613,000 bushels; oil, 3,300,000 gallons; wine, 6,600,000 gallons.

furnaces near Bastia and Porto Vecchio; but of late years copper mines have been opened at Castifao, near Corte, and argentiferous lead is being procured from a mine near Argentella, not far from Ile Rousse. Red and blue granite, porphyry, alabaster, serpentine, and marble are being quarried. There are many mineral springs, but the only one enjoying a European reputation is that of Orezzo, which rises in the picturesque district of Castagniccia. Its ferruginous water contains a considerable quantity of carbonic acid, and is recommended as efficacious in a host of diseases.

The most important town of Corsica, though not its capital, is Bastia, thus

Fig. 135.—View of Bastia.

named from a Genoese castle built towards the close of the fourteenth century on the beach of the hill village of Cardo. Bastia stands about a mile to the north of the two former capitals of the island, viz. Mariana and Biguglia, of which the former has left no trace, whilst the latter has dwindled down to a miserable village. The geographical position of Bastia is excellent, for it is within easy reach of Italy, and frequent communications with that country have exercised a most happy influence upon its inhabitants, who are the most civilised and industrious of the whole island. Its harbour is small, and far from safe, but it is much frequented. The city rises amphitheatrically upon hills, and is surrounded by delightful gardens and numerous villas.

St. Florent, only six miles from Bastia, but on the western coast of the island, has an excellent harbour, but the atmosphere hanging over its marshes is deadly. Ile Rousse, farther to the west, is the principal port of the fertile district of Balagna. It was founded by Paoli in 1758, in order to ruin Calvi, which had remained faithful to the Genoese. This object has been attained. Ile Rousse exports large quantities of oil and fruit, whilst the old town of Calvi, on its whitish rock, is a place without life, frequently visited by malaria. The coast to the south of Calvi, as far as the Gulf of Sagone, though exceedingly fertile, is almost a desert, and many parts of it suffer from malaria. Ajaccio, however, at one time merely a maritime suburb of Castelvecchio, standing a short distance inland, has risen into great importance. It is the pleasantest and best-built town of the island, and Napoleon, the most famous of its sons, showered favours upon it. The inhabitants fish and cultivate their fertile orchards. They also derive great advantages from a multitude of visitors, who go thither to enjoy a delicious climate and picturesque scenery.

The other towns of Corsica are of no importance whatever. Sartène, though the capital of an arrondissement, is merely a village, and the activity of the district centres in the little port of Propriano, on the Gulf of Valinco, one of the trysting-places of Neapolitan fishermen. Corte is famous in the history of the island as the birthplace of the heroes of the wars of independence. Porto Vecchio, though in possession of the best harbour of the island, is frequented only by a few coasting vessels, whilst Bonifacio, an ancient ally of the Genoese, is important only because of its fortifications. The prospect from the isolated limestone rock upon which it is built is exceedingly picturesque. The mountains of Limbara stand out clearly against the sky, and in front we look down upon the granitic islets dotting the Strait of Bonifacio, so dangerous to navigators. It was here the frigate *La Sémillante* foundered in 1855, with nearly a thousand souls on board.*

* Towns of Corsica (1872):—Bastia, 17,950; Ajaccio, 16,550; Corte, 5,150; Sartène, 4,150; Bonifacio, 3,600; Bastelica, 2,950; Calenzana, 2,600; Calvi, 2,175 inhabitants.

SPAIN.*

I.—General Aspects.

THE Iberian peninsula, Spain and Portugal, must be looked upon geographically as one. Differences of soil, climate, and language may have justified its division into two states, but in the organism of Europe these two constitute but a single member, having the same geological history, and exhibiting unity in their physical configuration.†

Compared with the other peninsulas of Southern Europe, viz. Italy and that of the Balkans, Iberia is most insular in its character. The isthmus which attaches it to the trunk of Europe is comparatively narrow, and it is defined most distinctly by the barrier of the Pyrenees. The contour of the peninsula is distinguished by its massiveness. There are curving bays, but no inlets of the sea penetrating far inland, as in the case of Greece.‡

It was said long ago, and with justice, that Africa begins at the Pyrenees. Iberia, indeed, bears some resemblance to Africa. Its outline is heavy, there are hardly any islands along its coasts, and few plains open out upon the sea. But it is an Africa in miniature, only one-fiftieth the size of the continent upon which it appears to have been modelled. Moreover, the oceanic slope of the peninsula is quite European as to climate, vegetation, and abundance of running water; and

* Authorities:—Coello, F. de Luxan y A. Pascual, "Reseñas Geográfica, Geológica y Agrícola de España;" Baron Davillier et Gust. Doré, "Voyage en Espagne;" De Laborde, "Itinéraire Descriptif de l'Espagne;" Bory de Saint-Vincent, "Résumé Géographique de la Péninsule Ibérique;" De Verneuil et Collomb, "Mémoires Géologiques sur l'Espagne;" Ford, "Handbook for Travellers in Spain;" Fern. Garrido, "L'Espagne Contemporaine;" Cherbuliez, "L'Espagne Politique;" Ed. Quinet, "Mes Vacances en Espagne;" Th. Gautier, "Tras los Montes," "Voyage en Espagne;" M. Willkomm, "Die Pyrenaische Halbinsel," "Strand- und Steppengebiete der iberischen Halbinsel;" George Sand, "Un Hiver à Majorque;" Ludw. Salvator, "Balearen in Wort und Bild;" Bladé, "Études Géographiques sur la Vallée d'Andorre;" W. von Humboldt, "Urbewohner Spaniens;" Eug. Cordier, "Organisation de la Famille chez les Basques;" Paul Broca, "Mémoires d'Anthropologie."

† Area of the Iberian peninsula, exclusive of the Balearic Islands, 225,605 square miles; area of Spain, 191,104 square miles; of Portugal (without the Azores), 34,501 square miles. Average height, according to Leipoldt, 2,300 feet.

‡ Contour of peninsula, 2,015 miles, of which 1,301 are on the Atlantic, and 714 on the Mediterranean. Width of the isthmus of the Pyrenees, 260 miles.

certain features of its flora even justify a belief that at some remote epoch it was joined to the British Islands. African Hispania only begins in reality with the treeless plateaux of the interior, and more especially with the Mediterranean coasts. There we meet the zone of transition between the two continents. Its general aspect, flora, fauna, and even population, mark out that portion of Spain as an integral part of Barbary; the Sierra Nevada and the Atlas, facing each other, are sister mountains; and the strait which separates them is a mere accident in the surface relief of our planet.

Fig. 136.—The Table-lands of the Iberian Peninsula.

Spain, though nearly surrounded by the sea, is nevertheless essentially continental in its character. Nearly the whole of it consists of table-lands, and only the plains of the Tajo (Tagus) and of Andalusia open out broadly upon the ocean. The coast, for the most part, rises steeply, and the harbours are consequently difficult of access to the inhabitants of the interior, a circumstance most detrimental to the development of a large sea-borne commerce.

Ever since the discovery of the ocean high-roads to America and the Indies, the Atlantic coast of the Iberian peninsula has taken the lead in commercial matters,

a fact easily accounted for by the physical features of the country. Spain, like peninsular Italy, turns her back upon the east. The plateaux slope down gently towards the west; the principal rivers, the Ebro alone excepted, flow in that direction; and the water-shed lies close to the Mediterranean shores.

Spain must either have given birth to an aboriginal people, or was peopled by way of the Pyrenees and by emigrants crossing the narrow strait at the columns of Hercules. The Iberian race actually forms the foundation of the populations of Spain. The Basks, or Basques, now confined to a few mountain valleys, formerly occupied the greater portion of the peninsula, as is proved by its geographical nomenclature. Celtic tribes subsequently crossed the Pyrenees, and established themselves in various parts of the country, mixing in many instances with the Iberians, and forming the so-called Celtiberians. This mixed race is met with principally in the two Castiles, whilst Galicia and the larger portion of Portugal appear to be inhabited by pure Celts. The Iberians had their original seat of civilisation in the south; they thence moved northward along the coast of the Mediterranean, penetrating as far as the Alps and the Apennines.

These original elements of the population were joined by colonists from the great commercial peoples of the Mediterranean. Cádiz and Málaga were founded by the Phœnicians, Cartagena by the Carthaginians, Sagonte by immigrants from Zacynthe, Rosas is a Rhodian colony, and the ruins of Ampurias recall the Emporium of the Massilians. But it was the Romans who modified the character of the Iberian and Celtic inhabitants of the peninsula, whom they subjected after a hundred years' war. Italian culture gradually penetrated into every part of the country, and the use of Latin became universal, except in the remote valleys inhabited by the Basques.

After the downfall of the Roman empire Spain was successively invaded by Suevi, Alani, Vandals, and Visigoths, but only the latter have exercised an abiding influence upon the language and manners of the Spaniards, and the pompous gravity of the Castilian appears to be a portion of their heritage.

To these northern invasions succeeded an invasion from the neighbouring continent of Africa. The Arabs and Berbers of Mauritania gained a footing upon the rock of Gibraltar early in the eighth century, and very soon afterwards nearly the whole of Spain had fallen a prey to the Mussulman, who maintained himself here for more than seven centuries. Moors immigrated in large numbers, and they substantially affected the character of the population, more especially in the south. The Inquisition expelled, or reduced to a condition of bondage, hundreds of thousands of these Moors, but its operations only extended to Mussulmans or doubtful converts, whilst Arab and Berber blood had already found its way into the veins of the bulk of the population. Castilian bears witness to the great influence of the Saracens, for it contains many more words of Arabic than of Visigothic origin, and these words designate objects and ideas evidencing a state of progressive civilisation, such as existed when the Arabs of Córdova and Granada inaugurated the modern era of science and industry in Europe.

During the dominion of the Moors the Jews prospered singularly on the soil of Spain, and their number at the time of the first persecution is said to have been 800,000. Supple, like most of their faith, they managed to get a footing in both camps, the Christian and Mohammedan, and enriched themselves at the expense of each. They supplied both sides with money to carry on the war, and, as farmers of taxes, they oppressed the inhabitants. The Christian faith triumphed in the end; the kings, to pay the cost of their wars, proclaimed a crusade against the Jews; and the people threw themselves with fury upon their hated oppressors, sparing neither iron, fire, tortures, nor the stake. A few Jewish families may have escaped destruction by embracing Catholicism, but the bulk of that people perished or were driven into exile.

Far happier has been the lot of the Gipsies, or *Gitanos*, who are sufficiently numerous in Spain to give a special physiognomy to several large towns. These Gipsies have always conformed outwardly to the national religion, and the Inquisition, which has sent to the stake so many Jews, Moors, and heretics, has never interfered with them. The Gipsies, in many instances, have settled down in the towns, but they all have traditions of a wandering life, and most highly respect those of their kinsmen who still range the woods and plains. These latter are proud of their title of *ciandantes*, or wayfarers, and despise the dwellers in towns. These Spanish Gitanos appear to be the descendants of tribes who sojourned for several generations in the Balkans, for their lingo contains several hundred words of Slav and Greek origin.

M. de Bourgoing has drawn attention to the great diversity existing amongst the population of Spain. A Galician, for instance, is more like an Auvergnat than a Catalonian, and an Andalusian reminds us of a Gascon. Most of the inhabitants, however, have certain general features, derived from a common national history and ancestry.

The average Spaniard is of small stature, but strong, muscular, of surprising agility, an indefatigable walker, and proof against every hardship. The sobriety of Iberia is proverbial. "Olives, salad, and radishes are fit food for a nobleman." The physical stamina of the Spaniard is extraordinary, and amply explains the ease with which the *conquistadores* surmounted the fatigues which they were exposed to in the dreaded climate of the New World. These qualities make the Spaniard the best soldier of Europe, for he possesses the fiery temperament of the South joined to the physical strength of the North, without standing in need of abundant nourishment.

The moral qualities of the Spaniard are equally remarkable. Though careless as to every-day matters, he is very resolute, sternly courageous, and of great tenacity. Any cause he takes up he defends to his last breath. The sons always embrace the cause of their fathers, and fight for it with the same resolution. Hence this long series of foreign and civil wars. The recovery of Spain from the Moors took nearly seven centuries; the conquest of Mexico, Peru, and South America was one continued fight lasting throughout a century. The war of independence which freed Spain from the yoke of Napoleon was an almost unexampled

effort of patriotism, and the Spaniards may justly boast that the French did not find a single spy amongst them. The two Carlist wars, too, would have been possible nowhere else but in Spain.

Who need wonder, after this, if even the lowliest Spaniard speaks of himself with a certain haughtiness, which in any one else would be pronounced presumptuous? "The Spaniard is a Gascon of a tragic type;" so says a French traveller. With him deeds always follow words. He is a boaster, but not without reason. He unites qualities which usually preclude each other, for, though haughty, he is kindly in his manners; he thinks very highly of himself, but is considerate of the feelings of others; quick to perceive the shortcomings of his neighbours, he rarely makes them a subject of reproach. Trifles give rise to a torrent of sonorous language, but in matters of importance a word or a gesture suffices. The Spaniard combines a solemn bearing and steadfastness with a considerable amount of cheerfulness. Nothing disquiets him; he philosophically takes things as they are; poverty has no terrors for him; and he even ingeniously contrives to extract pleasure and advantage from it. The life of Gil Blas, in whom the Spaniards recognise their own likeness, was more chequered than that of any other hero of romance, and yet he was always full of gaiety, which even the dark shadow of the Inquisition, then resting upon the country, failed to deprive him of. "To live on the banks of the Manzanares," says a Spanish proverb, "is perfect bliss; to be in paradise is the second degree of happiness, but only on condition of being able to look down upon Madrid through a skylight in the heavens."

These opposites in the character of the Spaniards give rise to an appearance of fickleness which foreigners are unable to comprehend, and they themselves complacently describe them as *cosas de España*. How, indeed, are we to explain so much weakness associated with so many noble qualities, so many superstitions in spite of common sense and a keen perception of irony, such ferocity of conduct in men naturally generous and magnanimous? A Spaniard, in spite of his passions, will resign himself philosophically to what he looks upon as inevitable. *Lo que ha de ser no puede faltar*, "What is to be will be," he says, and, wrapped up in his cloak, he allows events to take their course. The great Lord Bacon observed, three hundred years ago, that the "Spaniards looked wiser than they were;" and, indeed, most of them are passionately fond of gambling, and their apathetic fatalism accounts for many of the ills their country suffers. The rapid decay which has taken place in the course of three centuries has led certain historians to number the Spaniards amongst fallen nations. The edifices met with in many towns and villages speak of a grandeur now past, and the *despoblados* and *dehesas*, which we encounter even in the vicinity of the capital, tell of once fertile fields returned to a state of nature.

Buckle, in his "History of Civilisation," traces this decay to the physical nature of Spain and to a long succession of religious wars. The Visigoths defended Arianism against the Franks, and when the Spaniards had become good Catholics their country was invaded by Moors, and for more than twenty generations they struggled against them. It thus happened that patriotism became identical with

absolute obedience to the behests of the Church, for every one, from the King down to the meanest archer, was a defender of the faith rather than of his native soil. The result might have been foretold. The Church not only took possession of most of the land won from the infidels, but it also exercised a baneful influence upon the Government, and, through its dreaded tribunals of the Inquisition, over the whole of society.

But whilst these long religious struggles tended to the moral and intellectual abasement of the Spaniards, there were other causes which operated in an inverse sense, and these Buckle does not appear to have properly appreciated. The kings, in order to secure the support of the people in their wars against the Mussulmans, found themselves compelled to grant a large measure of liberty. The towns governed themselves, and their delegates, as early as the eleventh century, sat with the nobility and clergy in the Cortes, and voted the supplies. Local government conferred advantages upon Spain then enjoyed only in few parts of Europe.

Fig. 137.—Dehesas in the Environs of Madrid.
Scale 1 : 450,000.

Industry and the arts flourished in these prosperous cities, and a stop was even put to the encroachments of the clergy long before Luther raised his powerful voice in Germany.

A struggle between the supporters of local government and of a centralized monarchy at length became imminent, and no sooner had the infidels been expelled than civil war began. It terminated in favour of King and Church, for the *comuneros* of the Castiles met with little support in the other provinces, and their towns were ravaged by the bloodthirsty generals of Charles V.

The discovery of the New World, which happened about this period, proved a disaster to Spain, for young men of enterprise and daring crossed the Atlantic, and thus weakened the mother country, which was too small to feed such huge colonies. The immense amount of treasure (more than £2,000,000,000 between 1500 and 1702) sent home from the colonies contributed still further to the rapid decay of Spain, for it corrupted the entire nation. Money being obtainable without

work, all honest labour ceased, and when the colonies no longer yielded their metallic treasures the country saw itself impoverished, for the gold and silver had found their way to foreign lands, whence Spain had procured her supplies.

History affords no other example of so rapid a decadence brought about without foreign aggression. The workshops were closed, the arts of peace forgotten, the fields but indifferently cultivated. Young men flocked to the 9,000 monasteries to enjoy a life of indolence, and "science was a crime, ignorance and stupidity were the first of virtues." Population decreased, and the Spaniard even lost his ancient renown for bravery. If the Bourbon kings placed foreigners in

Fig. 138.—Density of the Population of the Iberian Peninsula.

all high positions of state, they did so because the Spaniards had become incapable of conducting public business.

But if we compare the Spain of our own days with the Spain of the Inquisition, we cannot fail to be struck with the vast progress made. Spain is no longer a "happy people without a history," for ever since the beginning of the century it has been engaged in struggles, and during this period of tumultuous life it has done more for arts, science, and industry than in the two centuries of peace which succeeded the dark reign of Philip II. No doubt Spain might have done

even more if the strength of the country had not been wasted in internal struggles. Unfortunately the geographical configuration of the peninsula is unfavourable to the consolidation of the nation. The littoral regions combine every advantage of climate, soil, and accessibility, whilst the resources of the inland plateaux are comparatively few. The former naturally attract population; they abound in large and bustling cities, and are more densely populated than the interior of the country. Madrid, which occupies a commanding position almost in the geometrical centre of the country, has become a focus of life, but its environs are very thinly inhabited.

This unequal distribution of the population could not fail to exercise a powerful influence upon the history of the country. Each of the maritime provinces felt sufficiently strong to lead a separate existence. During the struggles with the Moors common interests induced the independent kingdoms of Iberia to co-operate, and facilitated the establishment of a central monarchy; but, to maintain this unity afterwards, it became necessary to have recourse to a system of terrorism and oppression. Portugal, being situated on the open Atlantic, shook off the detested yoke of Castile after less than a century's submission. In the rest of the peninsula political consolidation is making progress, thanks to the facilities of intercommunication and the substitution of Castilian for the provincial dialects; but it would be an error to suppose that Andalusians and Galicians, Basques and Catalans, Aragonese and Madrileños, have been welded into one nation. Indeed, the federal constitution advocated by Spanish republicans appears to be best suited to the geographical configuration of the country and the genius of its population. The desire to establish provincial autonomy has led to most of the civil wars of Spain, whether raised by *Carlists* or *Intransigentes*. It is therefore meet that, in our description of Spain, we should respect the limits traced by nature, bearing in mind the fact that the political boundaries of the province do not always coincide with water-sheds or linguistic boundaries.

II.—The Castiles, Leon, and Estremadura.*

The great central plateau of the peninsula is bounded on the north, east, and south by ranges of mountains extending from the Cantabrian Pyrenees to the Sierra Morena, and slopes down in the west towards Portugal and the Atlantic. The uplands through which the Upper Duero, the Tajo (Tagus), and the Guadiana take their course are thus a region apart, and if the waters of the ocean were to rise 2,000 feet, they would be converted into a peninsula attached by the narrow isthmus of the Basque provinces to the French Pyrenees. The vast extent of these plateaux—they constitute nearly half the area of the whole country—accounts for the part they played in history, and their commanding position enabled the Castilians to gain possession of the adjacent territories.

	Area.	Population (1870).	Density.
* Basin of the Duero (Leon and Old Castile, exclusive of Logroño and Santander)	36,593 sq. m.	2,550,000	69
Basins of the Tajo and the Guadiana . . .	44,719 „	2,276,000	51

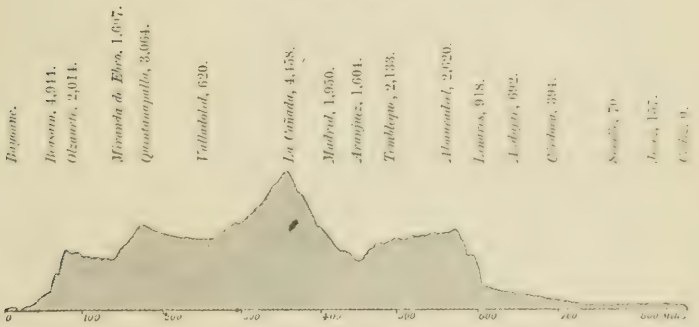
The Castiles can hardly be called beautiful, or rather their solemn beauty does not commend them to the majority of travellers. Vast districts, such as the Tierra de Campos, to the north of Valladolid, are ancient lake beds of great fertility, but exceedingly monotonous, owing to the absence of forests. Others are covered with small stony hillocks; others, again, may be described as mountainous. Mountain ranges covered with meagre herbage bound the horizon, and sombre gorges, enclosed between precipitous walls of rock, lead into them. Elsewhere, as in the Lower Estremadura, we meet with vast pasture-lands, stretching as far as the eye can reach to the foot of the mountains, and, as in certain parts of the American prairies, not a tree arrests the attention. Looking to the fearful nakedness of these plains, one would hardly imagine that a law was promulgated in the middle of last century which enjoins each inhabitant to plant at least five trees. Trees, indeed, have been cut down more rapidly than they were planted. The peasants have a prejudice against them; their leaves, they say, give shelter to birds, which prey upon the corn-fields. Small birds, nightingales alone excepted, are pursued without mercy, and a proverb says that "swallows crossing the Castiles must carry provisions with them." Trees are met with only in the most remote localities. The hovels of the peasantry, built of mud or pebbles, are of the same colour as the soil, the walled towns are easily confounded with the rock near them, and even in the midst of cultivated fields we may imagine ourselves in a desert. Many districts suffer from want of water, and villages which rejoice in the possession of a spring proclaim the fact aloud as one of their attributes. Huge bridges span the ravines, though for more than half the year not a drop of water passes over their pebbly beds.

The Sierra Guadarrama and its western continuation, the Sierra de Gredos, separate this central plateau of Spain into two portions, lying at different elevations. Old Castile and Leon, which lie to the north, in the basin of the Duero, slope down from east to west from 5,600 to 2,300 feet; whilst New Castile and La Mancha, in the twin basins of the Tajo and the Guadiana, have an average elevation of only 2,000 feet. In the tertiary age these two plateaux were covered with huge lakes. One of them, the contours of which are indicated by the débris carried down from the surrounding hills, originally discharged its waters in the direction of the valley of the Ebro, but subsequently opened itself a passage through the crystalline mountains of Portugal, now represented by the gorges of the Lower Duero. At another epoch this Lake Superior communicated with the lake which overspread what are now the plains of New Castile and La Mancha. The area covered by these two lakes amounted to 30,000 square miles, and Spain was then a mere skeleton of crystalline mountains, joined together by saddles of triassic, Jurassic, and cretaceous age, enclosing these two fresh-water lakes, and bounded exteriorly by the ocean. This geological period must have been of very long duration, for the lacustrine deposits are sometimes nearly a thousand feet in thickness. The miocene strata which form the superficial deposits of these two lake basins of the Castiles are geologically of the same age, for fossil bones of the same great animals—megatheria, mammoths, and hipparions—are found in both.

The Cantabrian Mountains bound Leon and Old Castile towards the north-west and north, but broad mountain ranges run out from these immediately to the east of the Peña Labra, and form the water-shed between the basin of the Duero and the head-stream of the Ebro. These ranges are known by various names. They form first the *Páramos* of Lora (3,542 feet), which slope gently towards the south, but sink down abruptly to the Ebro, which flows here in a gorge many hundred feet in depth. The water-shed to the east of these continues to the mountain pass of the Brujula, across which leads the road (3,215 feet) connecting Burgos with the sea. Beyond this pass the so-called *Montes* of Oca gradually increase in height, and join the crystalline Sierra de Demanda, culminating in the Pico de San Lorenzo (7,554 feet). Another mountain mass lies farther to the south-east. It rises in the Pico de Urbion to a height of 7,367 feet, and gives birth to the river Duero. The water-shed farther on is formed by the Sierra Cebollera

Fig. 139.—Profile of the Railway from Bayonne to Cadiz

(Altitudes in feet.)



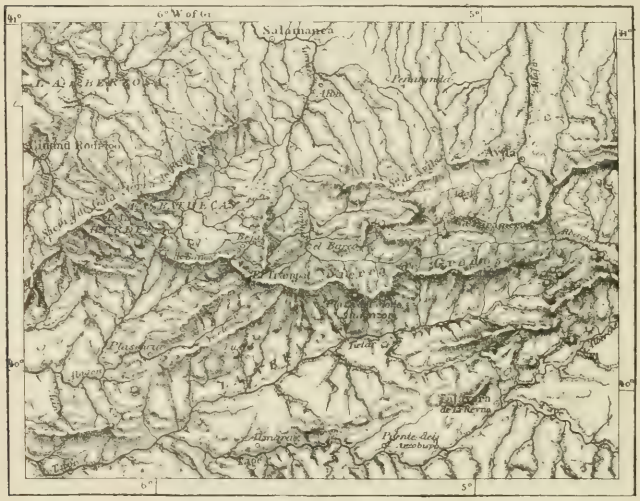
(7,039 feet), which subsides by degrees, its ramifications extending into the basins of the Ebro and Duero. The Sierra de la Moncayo (7,905 feet), a crystalline mountain mass similar to the San Lorenzo, but exceeding it in height, terminates this portion of the enceinte of the central plateau. The broad ranges beyond offer no obstacles to the construction of roads, but there are several rugged ridges to the south of the Cebollera and Moncayo, which force the Duero to take a devious course through the defile of Soria. Numantia, the heroic defence of which has since been imitated by many other towns of the peninsula, stood near that gorge.

The average height of the mountains separating the basin of the Duero from that of the Tajo is more than that of those in the north-east of Old Castile. The mountains gradually increase in height towards the west and south-west, until they form the famous Sierra de Guadarrama, the granitic rocks of which bound the horizon of Madrid in the north. It constitutes a veritable wall between the two

Castiles, and the construction of the roads which lead in zigzag over its passes of Somosierra (4,680 feet), Navacerrada (5,834 feet), and Guadarrama (5,030 feet) was attended with difficulties so considerable that Ferdinand VI., proud of the achievement, placed the statue of a lion upon one of the highest summits, and thus recorded that the "King had conquered the mountains." This sierra forms a natural rampart to the north of the plains of Madrid, and many sanguinary battles have been fought to secure a passage through them. The railway to Madrid avoids them, but the depression of Ávila, through which it passes, is nevertheless more elevated than the summit of the Mont Cenis Railway.

The mountains to the south-west of the Peak of Peñalara (7,870 feet), which

Fig 140.—Sierras de Gredos and de Gata.
Scale 1 : 800,000.



is the culminating point of the sierra, sink down rapidly, and at the Alto de la Cierva (6,027 feet) the chain divides into two branches, of which the northern forms the water-shed between the Duero and the Tajo, whilst the more elevated southern chain joins the Sierra de Guadarrama to the Sierra de Gredos, but is cut in two by the defile excavated by the river Alberche, which rises to the north of it.

The Sierra de Gredos is, next to the Pyrenees and the Sierra Nevada of Granada, the most elevated mountain chain of Spain, for in the Plaza del Moro Almanzor it attains a height of 8,680 feet, and thus reaches far beyond the zone of trees. Its naked summits of crystalline rocks remain covered with snow during more than half the year. The country extending along the southern slope

of these mountains is one of the most delightful districts of all Spain. It abounds in streams of sparkling water; groups of trees are dotted over the hill-slopes and shield the villages; and Charles V., when he selected the monastery of St. Yaste as the spot where he proposed to pass the remainder of his days, exhibited no mean taste. In former times the foot of the sierra was much more frequented, for the Roman road known as *Via Lata* (now called *Camino de la Plata*) crossed immediately to the west of it, by the Puerto de Baños, and thus joined the valley of the Duero to that of the Tajo.

The Sierra de Gata, which lies beyond this old road, has a course parallel with that of the Sierra de Gredos, and this parallelism is observable likewise with respect to the minor chains and the principal river beds of that portion of Spain. The Sierra de Gata rises to a height of 5,690 feet in the Peña de Francia, thus named after a chapel built by a Frankish knight. Within its recesses are the secluded valleys of Las Batuecas and Las Hurdes.

In the eastern portion of New Castile the country is for the most part undulating rather than mountainous, and, if the deep gorges excavated by the rivers were to be filled up, would present almost the appearance of plains. The most elevated point of this portion of the country is the Muela de San Juan (5,900 feet), in the Montes Universales, thus called, perhaps, because the Tajo, the Júcar, the Guadalaviar, and other rivers flowing in opposite directions take their rise there.

The Sierra del Tremendal, in the district of Albarracin, farther north, is said to be frequently shaken by earthquakes, and sulphurous gases escape there where oolitic rocks are in contact with black porphyry and basalt. Several triassic hills in the vicinity of Cuenca are remarkable on account of their rock-salt, the principal mines of which are those of Minglanilla.

Farther south the height of land which separates the rivers flowing to the Mediterranean from those tributary to the Tajo and Guadiana is undulating, but not mountainous. We only again meet with real mountains on reaching the head-waters of the Guadiana, Segura, and Guadalimar, where the Sierra Morena, forming for 250 miles the natural boundary between La Mancha and Andalusia, takes its rise. Seen from the plateau, this sierra has the appearance of hills of moderate height, but travellers facing it from the south see before them a veritable mountain range of bold profile, and abounding in valleys and wild gorges. Geographically this sierra belongs to Andalusia rather than to the plateau of the Castiles.

In the west, judging from the courses of the Tajo and the Guadiana, the country would appear to subside by degrees into the plains of Portugal; but such is not the case. The greater portion of Estremadura is occupied by a mountain mass consisting of granite and other crystalline rocks. The sedimentary strata of the region bounded in the north by the Sierras of Gredos and Gata, and in the south by the Sierra de Aroche, are but of small thickness. In former times these granitic mountains of Estremadura retained pent-up waters of the lakes which then covered the interior plateaux, until the incessant action of water forced a passage through them. Their highest summits form a range between the rivers Guadiana and Tajo known as the Sierra of Toledo, and attain a height of 5,115 feet in

the Sierra de Guadalupe, famous in other days on account of the image of a miracle-working Virgin Mary, an object of veneration to Estremeños and Christianized American Indians.

Geologically the series of volcanic hills known as Campo de Calatrava (2,270 feet) constitute a distinct group. They occupy both banks of the Guadiana, and the ancient inland lake now converted into the plain of La Mancha washed their foot.

FIG. 141.—DEFILE OF THE TAJO IN THE PROVINCE OF GUADALAJARA

From their craters were ejected trachytic and basaltic lavas, as well as ashes, or *negrizales*, but acidulous thermal springs are at present the only evidence of subterranean activity.

The rivers of the Castiles are of less importance than might be supposed from a look at a map, for, owing to a paucity of rain, they are not navigable. The moisture carried eastward by the winds is for the most part precipitated upon the

exterior slopes of the mountains, only a small proportion reaching the Castilian plateaux. Evaporation, moreover, proceeds there very rapidly, and if it were not for springs supplied by the rains of winter there would not be a single perennial river.*

Of the three parallel rivers, the Duero, the Tajo, and the Guadiana, the latter two are the most feeble, for the supplementary ranges of the Sierras of Gredos and Guadarrama shut off their basins from the moisture-laden winds of the Atlantic. Yet, in spite of their small volume, the geological work performed by them in past ages was stupendous. Both find their way through tortuous gorges of immense depth from the edge of the plateaux down to the plains of Lusitania. The gorge of the Duero forms an appropriate natural boundary between Spain and Portugal, for it offers almost insurmountable obstacles to intercommunication. The more considerable tributaries of the Duero—such as the Tormes, fed by the snows of the Sierra de Gredos; the Yeltes; and the Agueda—likewise take their course through wild defiles, which may be likened to the *cañons* of the New World. The Tajo presents similar features, and below its confluence with the Alberche it enters a deep defile, hemmed in by precipitous walls of granite.

The Guadiana passes through a similar gorge, but only after it has reached the soil of Portugal. The hydrography of its head-streams, the Giguela and Záncara, which rise in the Serranio of Cuenca, offers curious features; but, as they are for the most part dry during summer, the bountiful springs known as the *ojos*, or "eyes," of the Guadiana are looked upon by the inhabitants as the true source of the river. They are three in number, and yield about four cubic yards of water a second. These springs are popularly believed to be fed by the Ruidera, which, after having traversed a chain of picturesque lakelets, disappears beneath a bed of pebbles; but Coello has shown that after heavy rains this head-stream of the Guadiana actually reaches the Záncara.

The climate of the Castilian plateaux is quite continental in its character. The prevailing winds of Spain are the same as in the rest of Western Europe, but the seasons and sudden changes of temperature in the upper basins of the Duero, the Tajo, and the Guadiana recall the deserts of Africa and Asia. The cold in winter is most severe, the heat of summer scorching, and the predominating winds aggravate these features. In winter, the *norte*, which passes across the snow-covered Pyrenees and other mountain ranges, sweeps the plains and penetrates through every crevice in the wretched hovels of the peasant. In summer a contrary wind, the *solano*, penetrates through breaks in the Sierra Nevada and Sierra Morena, scorches the vegetation, and irritates man and animals. The climate of Madrid † is typical of that of most of the towns of Castile. The air, though pure, is exceedingly dry and penetrating, and persons affected with diseases of the throat run considerable risk during their period of acclimation. "The air of Madrid does not put out a candle, but kills a man," says a proverb, and the climate of that city is described as "three months of winter and nine of hell." True, in the

* Average rainfall at Madrid, 16·7 inches; evaporation, 72·6 inches.

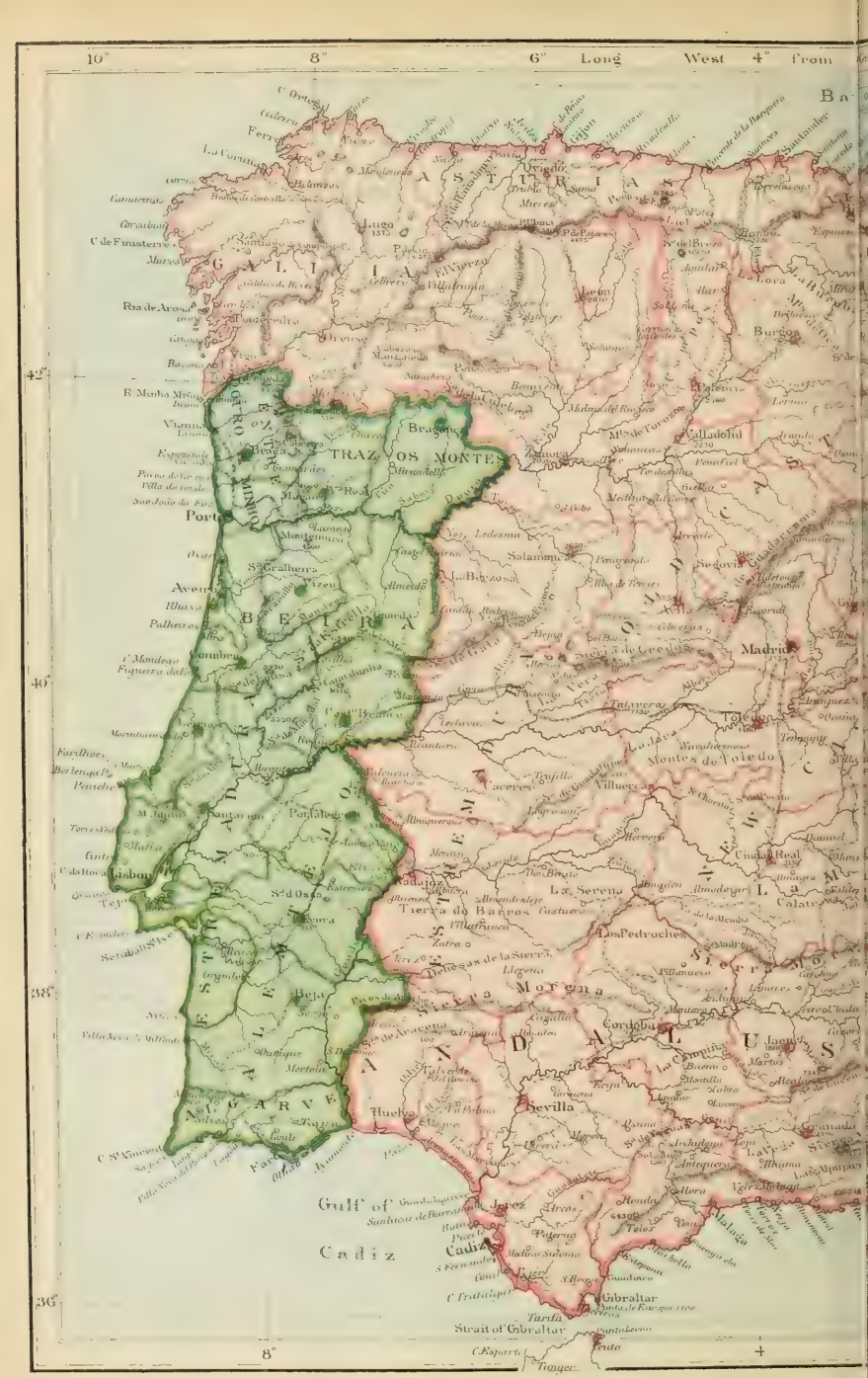
† Mean annual temperature, 57·9°; extremes, 104° and 14° F.

time of Charles V., Madrid enjoyed the reputation of having an excellent climate, and it is just possible that its deterioration may be ascribable to the destruction of the forests.

The greatest variety of plants is met with if we ascend from the plains to the summits of the mountains, but taken as a whole the vegetation is singularly monotonous, for the number of plants capable of supporting such extremes of

Fig. 142.—The Steppes of New Castile.
According to Willkomm. Scale 1 : 1,500,000.

temperature is naturally limited. Herbs and shrubs predominate. The thickets in the upper basin of the Duero and on the plateaux to the east of the Tajo and the Guadiana consist of thyme, lavender, rosemary, hyssop, and other aromatic plants; on the southern slopes of the Cantabrian Mountains heaths with small pink flowers predominate; vast areas in the mountains of Cuenca are covered with Spanish broom, or esparto; and saline plants abound in the environs of Albacete. These regions are generally described as the "Steppes of Castile," though "deserts"


10°
8°
6° Long West 4° from
42°
40°
38°
36°
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PORTUGAL
GALICIA
ASTURIAS
LEON
CASTILLA
TRAZOS MONTES
BEIRA
ESTREMADURA
ALEMTEJO
ALGARVE
ANDALUCIA
Bragança
Porto
Aveiro
Coimbra
Lisboa
Setubal
Beja
Portalegre
Castello Branco
Evora
Faro
Huelva
Sevilla
Cadiz
Gibraltar
Strait of Gibraltar
Gulf of Cadiz
Madrid
Toledo
Burgos
Valladolid
Salamanca
Zamora
Ciudad Real
Cordoba
Jaen
Granada
Malaga
Jerez
Arcos
Ronda
Tarifa
Tarifa
Tangier
Ceuta
Oporto
Viana
Braga
Vizeu
Almeida
Guarda
Castello Branco
Portalegre
Santarem
Setubal
Evora
Beja
Mertola
Ayamonte
Faro
Lagos
Sagres
Cape St Vincent
Cape Finisterre
La Coruña
Ferrol
Lugo
Orense
Tuy
Pontevedra
Santiago
Redondela
Vigo
Rivadavia
Monforte
Villafranca
Ponferrada
Astorga
Leon
Zamora
Toro
Benavente
Medina del Rioseco
Palencia
Valladolid
Tordesillas
Medina del Campo
Olmedo
Segovia
Avila
Arevalo
Talavera
Toledo
Aranjuez
Madrid
Escorial
Guadalajara
Alcala
Illescas
Navalcarnero
Montes de Toledo
Puertollano
Almaden
Almodovar
Ciudad Real
Almagro
Calatrava
Los Pedroches
La Serena
Tierra de Barros
Zafra
Llerena
Sierra Morena
Sierra Leone
Sierra Carbonera
Sierra Alhamilla
Sierra Nevada
Sierra de Ronda
Sierra de Cadiz
Sierra de Antequera
Sierra de Alcaraz
Sierra de Segura
Sierra de Cazorla
Sierra de Gador
Sierra de Filabres
Sierra de Baza
Sierra de Guadix
Sierra de Alhama
Sierra de Almijara
Sierra de Tejeda
Sierra de Mijas
Sierra de Grazalema
Sierra de Ubrique
Sierra de Aracena
Sierra de Huelva
Sierra de Aroche
Sierra de Monchique
Sierra de Caldeirão
Sierra de Estrella
Sierra de Gata
Sierra de Francia
Sierra de Bejar
Sierra de Gredos
Sierra de Guadarrama
Sierra de Somosierra
Sierra de Ayllon
Sierra de Urbion
Sierra de Cebollera
Sierra de Moncayo
Sierra de Albarracin
Sierra de Javalambre
Sierra de Espadan
Sierra de Mariola
Sierra de Aitana
Sierra de Benicadell
Sierra de Cullera
Sierra de Chiva
Sierra de Enguera
Sierra de Alcaraz
Sierra de Alcaraz
Sierra de Segura
Sierra de Cazorla
Sierra de Gador
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Sierra de Urbion
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Sierra de Moncayo
Sierra de Albarracin
Sierra de Javalambre
Sierra de Espadan
Sierra de Mariola
Sierra de Aitana
Sierra de Benicadell
Sierra de Cullera
Sierra de Chiva
Sierra de Enguera

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of Biscay
F R A N C E
NAVARRA
Zaragoza
MALLORCA
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would, perhaps, be a more appropriate term. For miles around the village of San Clemente not a rivulet, a spring, or a tree is met with, and the aspect of the country throughout is exceedingly dreary. The interminable plains of La Mancha —the "dried-up country" of the Arabs—adjoin these steppes in the west, and there corn-fields, vineyards, and pasture-grounds alternate with stretches of thistles, and the monotony is partly relieved by the windmills, with their huge sweeps slowly revolving overhead. Estremadura and the slopes of the Sierra Morena are principally covered with rock-roses, and from the summit of some hills a carpet of *jarales*, bluish green or brown, according to the season, extends as far as the eye reaches, and in spring is covered with an abundance of white flowers resembling newly fallen snow.

Woods are met with only on the slopes of the mountains. Oaks of various species and chestnut-trees occupy the lower zone, and conifers extend beyond them to the extreme limit of trees. These latter likewise cover the vast tracts of shifting sands which extend along the northern foot of the Sierra Guadarrama, and are the analogue of the French *landes*.

The remains of the ancient forests still shelter wild animals. In the beginning of this century bears were numerous on the southern slopes of the Cantabrian Mountains; the thickets of Guadarrama, Gredos, and Gata still harbour wolves, lynxes, wild cats, foxes, and even wild goats. Deer, hares, and other game abound. The oak forests are haunted by wild boars of immense size and strength. Before the downfall of Islam it was thought meritorious to keep large herds of pigs, and a traveller who visits the remote villages of Leon, Valladolid, and Upper Estremadura will find that this ancient custom still survives. The black hogs of Trujillo and Montanchez are famous throughout Spain for their excellent hams.

The country offers great facilities for the breeding of sheep and cattle; there are, however, several districts which are admirably suited to the production of cereals. The Tierra de Campos, in the basin of the Duero, is one of them. It owes its fertility to a subterranean reservoir of water, as do also the *mesa* of Ocaña and other districts in the upper basins of the Tajo and the Guadiana, which are arid only in appearance. The vine flourishes on stony soil, and yields excellent wine, and the same may be said of the olive-tree, which constitutes the wealth of the Campo de Calatrava. Agricultural pursuits would thus appear to offer great advantages; and if thousands of acres are still allowed to lie fallow, if nomad habits still predominate, this is owing to sloth, force of habit, the existence of feudal customs, and sometimes, perhaps, to discouragement produced by seasons of drought.

Most of the herds of *merinos* are obliged to traverse nearly half Spain in search of the food they require. Each herd of about 10,000 sheep is placed in charge of a *mayoral*, assisted by *rabadanes* in charge of detachments of from 1,000 to 1,200 animals. The shepherds and sheep of Balia, in Leon, are reputed to be the best. In the beginning of April the merinos leave their pasture-grounds in Andalusia, La Mancha, and Estremadura for the north, where they pass the summer, returning in September to the south. It may readily be imagined that

these wandering herds do much damage to the fields through which they pass, even though the privileges of the sheep-breeders were abrogated in a large measure in 1836. Spain, however, in spite of every advantage offered by nature, is obliged now to import sheep from abroad to improve its flocks. Mules, too, which are almost indispensable in so stony a country, are imported from France. Camels, llamas, and kangaroos have been introduced, but their number has never been large, and the fauna as well as the flora of the Castiles bears the stamp of monotony.

As is the land, so are its inhabitants. The men of Leon and the Castiles are grave, curt of speech, majestic in their gait, and of even temper. Even in their amusements they carry themselves with dignity, and those amongst them who respect the traditions of the good old time regulate every movement in accordance with a most irksome etiquette. The Castilian is haughty in the extreme, and *Yo soy Castellano !* cuts short every further explanation. He recognises no superiors, but treats his fellows on a footing of perfect equality. A foreigner who mixes for the first time in a crowd at Madrid or elsewhere in the Castiles cannot fail in being struck by the natural freedom with which rich and poor converse with each other.

The Castilian, thanks to his tenacious courage and the central position he occupies, has become the master of Spain, but he can hardly be said to be the master in his own capital. Madrid is the great centre of attraction of the entire peninsula, and its streets are crowded with provincials from every part of Spain. This invasion of the capital, and of the Castiles generally, is explained by the sparseness of the population of the plateaux, a sparseness not so much due to the natural sterility of the country as to political and social causes. There can be no doubt that the Castiles formerly supported a much denser population than they do now, but the towns of the valleys of the Tajo and the Guadiana have shrunk into villages, and the river, which was formerly navigable as far as Toledo, is so no longer, either because its volume is less now than it used to be, or because its floods are no longer regulated. Estremadura, at present one of the poorest provinces of Spain, supported a dense population in the time of the Romans, who founded there the Colonia Augusta Emerita (Mérida), which became the largest town of Iberia. During the dominion of the Moors, too, Estremadura yielded bounteous harvests, but the old cities have disappeared, and the fields are now covered with furze, broom, and rock-roses.

The expulsion of the Moors no doubt contributed towards the decay of these once fertile regions, but the principal cause must be looked for in the growth of feudal, military and ecclesiastical institutions, which robbed the cultivator of the fruits of his labours. Subsequently, when Cortez, Pizarro, and other *conquistadores* performed their prodigious exploits in the New World, they attracted the enterprising youth of the province. The peaceable cultivation of the soil was held in contempt, fields remained untilled, and 40,000 nomadic shepherds took possession of the country. It is thus the *Estremeños* became what they are, the "Indians" of the nation.

This decrease of population was unfortunately attended by a return towards barbarism. Three hundred years ago the region on the southern slopes of the Sierra de Guadarrama was famous for its industry. The linen and cloth of Avila, Medina del Campo, and Segovia were known throughout Europe: Burgos and Aranda del Duero were the seats of commerce and industry; and Medina de Rio Seco was known as "Little India," on account of the wealth displayed at its fairs. But misgovernment led to the downfall of these industries, the country became depopulated, and its ancient culture dwindled to a thing of the past. At the famous university of Salamanca the great discoveries of Newton and Harvey were still ignored at the close of last century as being "contrary to revealed religion," and the lower classes grovelled in the most beastly superstitions.

In this very province of Salamanca, close to the Peña de Francia, exist the "barbarous" Batuecas, who are charged with not being able to distinguish the seasons. Nor are the inhabitants of other remote mountain districts of the Castiles what we should call civilised. Amongst these may be noticed the *charros* of Salamanca and the famous *maragatos* of Astorga, most of them muleteers. They only intermarry amongst themselves, and are looked upon as the lineal descendants of some ancient tribe of Iberia. The suggestion that they are a mixed race of Visigoths and Moors is not deserving of attention, for neither in their dress nor in their manners do they remind us of Mussulmans. They wear loose trousers, cloth gaiters fastened below the knee, a short and close-fitting coat, a leather belt, a frill round the neck, and a felt hat with a broad brim. They are tall and strong, but wiry and angular. Their taciturnity is extreme, and they neither laugh nor sing when driving before them their beasts of burden. It is difficult to excite their passion, but, once roused, they become ferocious. Their honesty is above suspicion, and they may be safely trusted with the most valuable goods, which they will defend against every attack, for they are brave, and skilled in the use of arms. Whilst the men traverse the whole of Spain as carriers of merchandise, the women till the soil, which, being arid and rocky, yields but a poor harvest.

The vicissitudes of history explain the existence of numerous towns in the Castiles which can boast of having been the capital of the country at one time or other. Numantia, the most ancient of all those cities, exists no longer, and the learned are not yet agreed whether the ruins discovered near the decayed town of Soria are the remains of the walls demolished by Scipio Æmilianus. But there are several cities of great antiquity which possess some importance even at the present day. Leon is one of these. It was the head-quarters of a Roman legion (*septima gemina*), and its name, in reality a corruption of *legio*, is supposed to be symbolized by the lions placed in its coat of arms. Leon was one of the first places of importance taken from the Moors. Its old walls are in ruins now, and the beautiful cathedral has been transformed into a clumsy cube. Astorga, the "magnificent city" of Asturica Augusta, has fallen even lower than Leon, whilst Palencia (the ancient Pallantia) still enjoys a certain measure of prosperity, owing

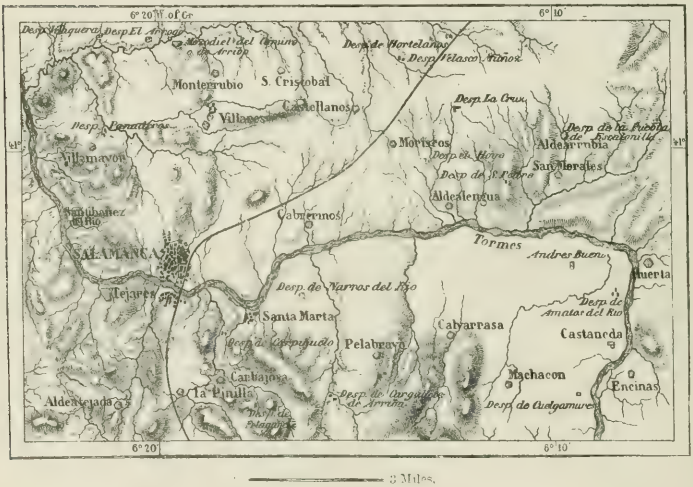
to its favourable geographical position at the Pisuerga, which has caused it to be selected as one of the great railway centres of the peninsula.

Burgos, the former capital of Old Castile, points proudly to its graceful cathedral and other ancient buildings, but its streets are nearly deserted, and the crowds which congregate occasionally in the churches, hotels, or at the railway station are composed, for the most part, of beggars. In the cathedral are preserved numerous relics, and the Cid, whose legendary birthplace, Bivar, is near, lies buried in it.

Valladolid, the Belad Walid of the Moors, at one time the capital of all Spain, enjoys a more favourable geographical position than Burgos. It lies on the Lower

Fig. 143.—Salamanca and its Despoblados.

Scale 1 : 200,000.



Pisuerga, where that river enters the broad plain of the Duero, at an elevation of less than 600 feet above the sea. There are numerous factories, conducted by Catalans, and the city boasts, like Burgos, of many curious buildings and historical reminiscences. The houses in which Columbus died and Cervantes was born are still shown, as is the beautiful monastery of San Pablo, in which resided Torquemada, the monk, who condemned 8,000 heretics to die at the stake. The castle of Simancas, where the precious archives of Spain are kept, is near this city.

Descending the Duero, we pass Toro, and then reach Zamora, the "goodly walls" of which proved such an obstacle to the Moors. Zamora, though on the direct line between Oporto and continental Europe, is an out-of-the-way place at

present, and the same may be said of the famous city of Salamanca, on the Tormes, to the south of it.

Salamanca, the Salmantica of the Romans, succeeded to Palencia as the seat of a university, and during the epoch of the Renaissance was described as the "mother of virtues, sciences, and arts," and the "Rome of the Castiles." It still deserves the latter epithet, because of its magnificent bridge built by Trajan, and the beau-

tiful edifices dating back to the fifteenth and sixteenth centuries. Its intellectual superiority, however, is a thing of the past.

Arevalo, and the famous town of Medina del Campo, to the north-east of Salamanca, carry on a considerable trade with corn. Ávila occupies an isolated hillock on the banks of the Adaja, to the north of the Sierra de Gredos. Ávila still preserves its turreted walls of the fifteenth century, and its fortress-like cathedral is a marvel of architecture. There are also curious sculptures of animals, which are ascribed

to the aboriginal inhabitants of the country. Similar works of rude art in the vicinity are known as the "bulls of Guisando," from a village in the Sierra de Gredos.

Segovia the "circumspect" is situated on an affluent of the Duero, like Ávila, and in the immediate vicinity of the Sierra de Guadarrama. Its turreted walls rise on a scarped rock, supposed to resemble a ship. On the poop of this

Fig. 145.—Toledo.

fancied ship, high above the confluence of the Clamores and Eresma, rise the ruins of the Moorish Alcazar, whilst the cathedral, in the centre of the city, is supposed to represent the mainmast. A beautiful aqueduct supplies Segovia with the clear waters of the Guadarrama. It is the finest Roman work of this class in Iberia, and far superior to the royal palace of San Ildefonso or De la Granja, in the neighbourhood of the city.

Toledo is the most famous city to the south of the great rampart formed by the

PEASANTS OF TOLEDO, CASTILE

ROMAN BRIDGE AT ALCANTARA.

Sierras of Guadarrama, Gredos, and Gata. This is the *Oretani Imperii caput*, the "mother of cities," the coronet of Spain and the light of the world, as it was called by Juan de Padilla, the most famous of its sons. Tradition tells us that it existed long before Hercules founded Segovia, and, like Rome, it stands upon seven hills. Toledo, with its gates, towers, Moorish and mediæval buildings, is indeed a beautiful city, and its cathedral is of dazzling richness. But, for all this, Toledo is a decayed place, and its famous armourers' shops have been swamped by a Government manufactory.

Talavera de la Reina, below Toledo, on the Tajo, still possesses some of its ancient manufactures of silk and faience. Puente del Arzobispo and the other towns on the Tajo are hardly more now than large villages. The bridge of Almaraz crosses the river far away from any populous town, and the old Roman bridge of Alconétar exists no longer. Alcántara,—that is, *the* bridge,—near the Portuguese frontier, still remains a monument of the architectural skill of the Romans. It was completed in the year 105, in the reign of Trajan, and its architect, Lacer, appears to have been a Spaniard. Its centre is at an elevation of 160 feet above the mean level of the Tajo, the floods of which rise occasionally to the extent of a hundred feet.

All the great towns of Estremadura lie at some distance from the Tajo, and its great volume of water has hitherto hardly been utilised for purposes of irrigation or navigation. On a fertile hill nearly twenty miles to the north of this river, the old town of Plasencia may be seen bounded in the distance by mountains frequently covered with snow. Cáceres is about the same distance to the south, as is also Trujillo, which received such vast wealth from the conquerors of Peru, but is now dependent upon its pigs and herds of cattle.

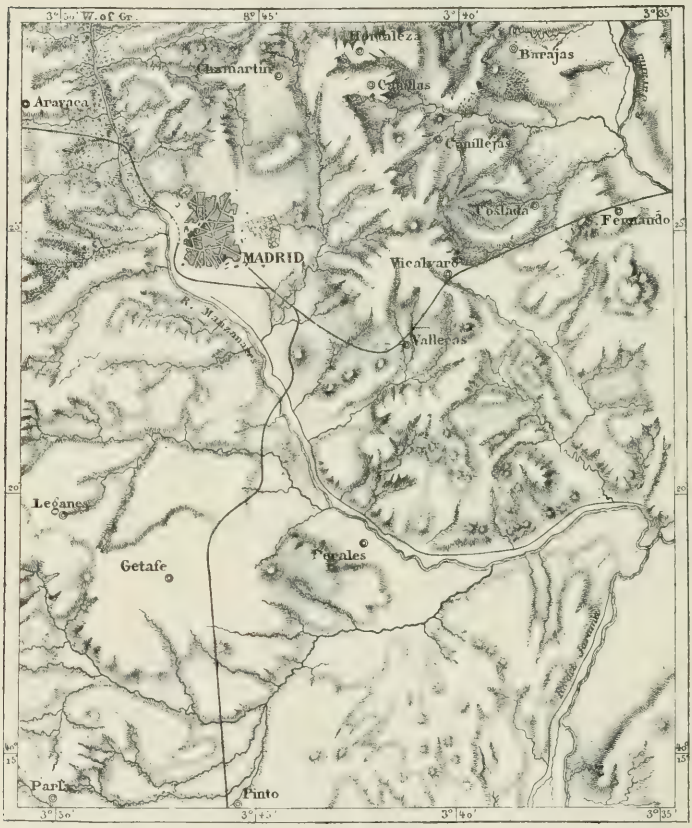
The position of those towns of Estremadura which lie on the banks of the Guadiana is more favourable. Badajoz, close to the Spanish frontier, has lost its ancient importance as a fortress since it became a place of commerce on the only railway which as yet joins Spain to Portugal. Mérida, on the same railway, is richer in Roman monuments than any other town of Spain, for there are a triumphal arch, the remains of an aqueduct, an amphitheatre, a naumachy, baths, and an admirable bridge of eighty granite arches, 2,600 feet in length; but in population it is far inferior to Don Benito, a town hardly mentioned in history, higher up the Guadiana, at the edge of the vast plain of La Serena. It was founded in the beginning of the sixteenth century, and together with its neighbour, Villanueva de la Serena, derives its wealth from the fertility of the surrounding country. Its fruits, and particularly its water-melons, are much esteemed. The plains on the right bank of the Guadiana abound in phosphate of lime, which is exported to France and England.

The towns of La Mancha are of no historical note, and the province owes its celebrity almost exclusively to Cervantes' creation, the incomparable "Don Quixote." Ciudad Real, an industrious place formerly; Almagro, known for its point-lace; Daimiel, near which stood the principal castle of the military order of Calatrava; Manzanares; and other towns are important principally because of their

trade in corn and wine. Almaden,—that is, "the mine,"—in a valley on the northern slope of the Sierra Morena, has become famous through its cinnabar mines, which for more than three centuries supplied the New World with mercury, and still yield about 1,200 tons annually.

Fig. 146.—Madrid and its Environs.

Scale 1 : 200,000.



Eastern Castile, being at a considerable elevation above the sea-level, and having a rugged surface, cannot support a population more dense than either La Mancha or Estremadura. There are but few towns of note, and even the capital, Cuenca, is hardly more than a third-rate provincial city. Picturesquely perched

upon a steep rock overhanging the deep gorges of the Huecar and Jucar, it merely lives in the past. The only other towns of note in that part of the country are Guadalajara, with a Roman aqueduct, and Alcalá, the native place of Cervantes and seat of an ancient university, which at one time saw 10,000 students within its walls. Both these towns are situated on the Henares, a tributary of the Tajo, and either would have been fit to become the capital of the kingdom.

Indeed, at the first glance, it almost appears as if Madrid owed its existence to the caprice of a king. It has no river, for the Manzanares is merely a torrent, its climate is abominable, and its environs present fewer advantages than those of Toledo, the ancient capital of the Romans and Visigoths. But once having been selected as the capital, Madrid could not fail to rise in importance, for it occupies a central position with respect to all other towns outside the basin of the Upper Tajo. Pinto (*Punctum*), a short distance to the south of Madrid, is popularly supposed to be the mathematical centre of the peninsula: and thus much is certain, that the plain bounded in the north by the Sierra de Guadarrama forms the natural nucleus of the country, and is traversed by its great natural highways.

Toledo occupies a position almost equally central. It was the capital of the country during the reign of the Romans, and subsequently became the capital of the ecclesiastical authorities and of the kings of the Visigoths, and retained that position until it fell into the power of the Moors. During the struggles between Moors and Christians the latter shifted their capital from place to place, according to the varying fortunes of the war, but no sooner had the former been expelled from Cordova than the Christian kings again established themselves in the plain to the south of the Sierra de Guadarrama. They had then to choose between Toledo and Madrid. Toledo no doubt offered superior advantages, but its citizens having joined the insurrection of the *comuneros* against Charles V., the Emperor-king decided in favour of Madrid. Philip III. endeavoured to remove the capital to Valladolid, but the natural attractions of Madrid proved too strong for him, and the schools, museums, public buildings, and manufactories which have arisen in the latter since then must for ever insure it a preponderating position. The railways, which now join Madrid to the extremities of the peninsula, countervail the disadvantages of its immediate neighbourhood: and although the purest Castilian is spoken at Toledo, it is Madrid which, through its press, has insured the preponderance of that idiom throughout Spain. Madrid has long been in advance of all other cities of the peninsula as regards political activity, industry, and commerce, but its growth having taken place during a period devoid of art, it is inferior to other towns with respect to the character of its public buildings. The museums, however, are amongst the richest in Europe, and make it a second Florence. Immediately outside the public promenades of the Prado and Buen Retiro we find ourselves in a desolate country covered with flints, and this must be crossed by a traveller desirous of visiting the delightful gardens of Aranjuez, the huge Escorial built by Philip II., or the villas in the wooded valleys of the Sierra de Guadarrama. These latter supply Madrid with water, as the neighbouring mountains do with ice. Formerly one of the most secluded of these valleys became

the seat of a mock-kingdom, nominally independent of the Kings of Castile. During the Moorish invasion the inhabitants of the plain of Jarama had sought shelter in the mountains, and the rest of the world forgot all about them. They called themselves Patones, and elected an hereditary king. About the middle of the seventeenth century the last of the line, by trade a carrier, surrendered his wand of authority into the hands of a royal officer, and the valley was placed under the jurisdiction of the authorities at Uceda.*

III.—Andalusia.†

Andalusia embraces the whole of the basin of the Guadalquivir, together with some adjoining districts. It is bounded in the north by the Sierra Morena, which

Fig. 147.—Aranjuez.

Scale 1 : 75,000.

in the direction of Portugal becomes a rugged mountain district of crystalline formation intersected by tortuous ravines, and rising in the Sierra de Aracena, north of the mining region of the Rio Tinto, to a height of 5,500 feet. Farther east the Sierra Morena ascends in terraces above the valley of the Guadalquivir, and on its reverse slope we meet with districts, such as that of Los Pedroches (1,650 feet), hardly less monotonous of aspect than the plains of La Mancha. The

* Population of the principal towns of the Castiles (1870):—*Old Castile:* Valladolid, 60,000; Burgos, 14,000; Salamanca, 13,500; Palencia, 13,000; Zamora, 9,000; Segovia, 7,000; Leon, 7,000; Ávila, 6,000. *New Castile:* Madrid, 332,000; Toledo, 17,500; Almagro, 14,000; Daimiel, 13,000; Ciudad Real, 12,000; Val de Peñas, 11,000; Almaden, 9,000; Manzanares, 9,000; Cuenca, 7,000; Talavera de la Reyna, 7,500; Guadalajara, 6,000. *Estremadura:* Badajoz, 22,000; Don Benito, 15,000; Cáceres, 12,000; Villanueva de la Serena, 8,000; Plasencia, 6,000; Mérida, 6,000.

† Area of the basin of the Guadalquivir, 21,000 square miles: area of Andalusia, 28,370 square miles; population (1870), 2,749,629; density, 91.

Punta de Almenara (5,920 feet), in the Sierra de Alcaraz, in the extreme east, may be looked upon as the culminating point of this sierra, which is indebted for its name of "Black Mountain" to the sombre pines which cloth its slopes.

The line of water-parting does not pass through the highest summits of this range. Most of the rivers rise on the plateau, and take their course, by picturesque gorges, right through the heart of the mountains. The most famous of these gorges is that of Despeñaperros (2,444 feet), leading from the dreary plains of La Mancha to the smiling valley of Andalusia. This pass has played a great part in every war. At its foot was fought in 1212 the fearful battle of

Fig. 148.—The Basins of the Guadiana and Guadalquivir.
Scale 1 : 3,000,000

Navas de Tolosa, in which more than 200,000 Mussulmans are said to have been slaughtered.

The mountains which shut in the basin of Andalusia on the east are cut up by deep river gorges into several distinct masses or chains, of which the Calar del Mundo (5,437 feet), Yelmo de Segura (5,925 feet), and Sierra Sagra (7,675 feet) are the principal. The southern mountain ranges uniformly extend from east to west. From north to south we cross in succession the Sierras de Maria (6,690 feet), de las Estancias, and de los Filabres (6,285 feet), so famous for its marbles. In the west the latter two ranges join the Sierra de Baza (6,230 feet), itself attached to the great culminating range of Iberia, the Sierra Nevada, by a saddle of inconsiderable height (2,950 feet).

The Sierra Nevada consists mainly of schists, through which eruptions of serpentine and porphyry have taken place. The area it occupies is small, but from whatever side we approach it rises precipitously, and the eye can trace the succeeding zones of vegetation up to that of perennial snows pierced by the peaks of Mulahacen (11,661 feet), Picacho de la Veleta (11,386 feet), and Alcazaba (7,590 feet). Vines and olive-trees clothe the foot-hills; to these succeed walnut-trees, then oaks, and finally a pale carpet of turf hidden beneath snow for six

Fig. 149.—The Pass of Despeñaperros.

months. Masses of snow accumulate in sheltered hollows, and these *ventisqueros*, *ventiscas*, or snow-drifts, supply Granada with ice. In the *Corral de la Veleta* there even exists a true glacier, which gives birth to the river Genil, and is the most southerly in all Europe. The more extensive glaciers of a former age have disappeared long ago. To the purling streams fed by the snows of the sierra the Vega of Granada owes its rich verdure, its flowers, and its excellent fruits, and the delightful valley of Lecrin its epithet of "Paradise of the Alpujarras."

No other district of Spain so forcibly reminds us of the dominion of the Moors. The principal summit is named after a Moorish prince. On the Picacho they lit a beacon on the approach of a Christian army, and in the Alpujarras, on the southern slope, they pastured their sheep. The Galician and Asturian peasants, who now occupy this district, are superior in no respect to the converted Moors who were permitted to remain at Ujijar, the capital of Alpujarras, when their

Fig. 150.—The Sierra Nevada as seen from Baza.

compatriots were driven forth. The natural riches of the mountains remain undeveloped, and they are surrounded by a belt of *despoblados*.

From the Pass of Alhedin (3,300 feet), between Granada and Alpujarra, we look down upon one of the most charming panoramas of the world. It was here that Boabdil, the fugitive Moorish king, beheld for the last time the smiling plains of his kingdom, and hence the spot is known as the "Last Sigh of the Moor," or the "Hill of Tears." From the highest summits of the sierra, however, the prospect is exceedingly grand. Standing upon the Picacho de la Veleta, we see Southern

Spain spread out beneath our feet, with its fertile valleys, rugged rocks, and russet-coloured wilds. Looking south, across the blue waters of the Mediterranean, the mountains of Barbary loom out in the distance, and sometimes we are even able to hear the murmuring of the waves as they beat against the coast.

The mountains around these giants of Granada are very inferior to them in height. The country in the north, which is bounded by the valleys of the Genil, Guadiana Menor, and Guadalquivir, is occupied by an upland intersected by deep ravines, and rising now and then into distinct mountain chains, such as the Sierra Magina (7,047 feet) and Sierra de Jabalcuz, near Jaen (1,800 feet); the chain Alta Coloma, farther south, with its wild pass, Puerto de Arenas, between Jaen and Granada; and the Sierra Susana, close to Granada, which extends westward to the mountain mass of the Parapanda, the great prophet of the husbandmen of the Vega :—

"Cuando Parapanda se pone la montera,
Llueve, aunque Dios no lo quisiera."

("When Parapanda puts on his cap it rains, though God may not wish it.")

The mountains extending along the coast are cut up by transverse valleys into several distinct masses. The Sierra de Gata, in the south-east, is a detached mountain mass, pierced by several extinct volcanoes. Farther west rises the Sierra Alhamilla, the torrents of which are so rich in garnets that the huntsmen use them instead of shot. Crossing a rivulet, we reach the superb Sierra de Gádor (7,620 feet), consisting of schists.

The Contraviesa (6,218 feet), which separates the Alpujarras from the Mediterranean, rises so steeply from the coast that even sheep can hardly climb it. The Sierra de Almijara, beyond the narrow valley of the Guadalfeo, and its western continuation, the Sierra de Alhama (7,003 feet), present similar features. The mountains on the other side of the Pass of Alfarnate or de los Alazores (2,723 feet) constitute the exterior rampart of an ancient lake bed, bounded in the north by an irregular swelling of ground known as Sierra de Yeguas. The road from Málaga to Antequera crosses that rampart in the famous Pass of El Torcal (4,213 feet), the fantastically shaped rocks of which bear some resemblance to the ruins of an extensive city. Archæologists have discovered there some of the most curious prehistoric remains of Iberia.

To the west of the basin of Málaga, drained by the Guadalhorce, the emissary of the ancient lake referred to above, the mountains again increase in height, and in the Sierra de Tolox attain an elevation of 6,430 feet. Snows remain here throughout the winter. From the Tolox mountain chains ramify in all directions. The Sierra Bermeja (4,756 feet) extends to the south-west, its steep promontories being washed by the waves of the sea; the wild "Serrania" de Ronda (5,085 feet) extends westward, and is continued in the mountain mass of San Cristóbal (5,627 feet), which sends branches southward as far as the Capes of Trafalgar and Tarifa. The rock of Gibraltar (1,408 feet), which rises so proudly at the entrance of the Mediterranean, is a geological outlier attached to the mainland by a strip of sand thrown up by the waves of the ocean.

GORGE DE LOS GAITANES, DEFILE OF GUADALHORCE.

Erosion has powerfully affected the mountains occupying the country between the basin of the Guadalquivir and the coast. Amongst the numerous river gorges, that of the Gaytanos, through which the Guadalhorce flows from the plateau of Antequera to the orange groves of Alora, is one of the wildest and most magnificent in all Spain. Only torrents enter the Mediterranean, and even of the rivers discharging their waters into the Atlantic there is but one which is of some importance, on account of its great volume and the facilities it offers for navigation. This is the Guadalquivir, which rises in the Sierra Sagra, at an elevation of 5,000 feet above the sea-level. Having received the Guadalimar, its current becomes

Fig. 151.—The Mouth of the Guadalquivir.

gentle, and it flows through a wide and open valley, thus differing essentially from the rivers of the Castiles, which, on their way to the sea, traverse narrow gorges. Its volume fairly entitles it to its Arab name of Wad-el-Kebir, or "large river." The geological work performed by this river and its tributaries has been enormous. Mountain ramparts have been broken through, lakes drained, and immense quantities of soil spread over the valley. Nowhere can this work be traced more advantageously than in the valley of the Genil of Granada, for the fertile district of La Vega was covered by a lake, the pent-up waters of which opened themselves a passage near Loja.

The estuary of the river has been gradually filled up by sediment. The tide ascends nearly as far as Seville, where the river is about 250 yards wide. Below that city it passes through an alluvial tract known as the *marismas*, ordinarily a dusty plain roamed over by half-wild cattle, but converted by the least rain into a quagmire. Neither villages nor homesteads are met with here, but the sands farther back are covered with dwarf palms, and lower down a few hills of tertiary formation approach close to the river, their vine-clad slopes affording a pleasing contrast to the surrounding solitude.

A contraction of the alluvial valley marks the exterior limit of the ancient estuary silted up by the Guadalquivir. Sanlúcar de Barrameda, a town of oriental aspect, stands on the left bank, whilst a range of dunes intervenes between the sea and the flat country on the right bank. The mouth of the river is closed by a bar, so that only vessels of small draught can enter it. These *Arenas Gordas*, or "great sands," are for the most part covered with pines, and, except on their exterior face, they have remained stable since the historical epoch.

The Guadalquivir is the only river of Spain which is navigable for a considerable distance above its mouth. Vessels of 200 tons ascend it as far as Seville, a distance of sixty miles. Sanlúcar was formerly the great port of Spain, and its coasting trade is still considerable. None of the other rivers of Andalusia are navigable. The Guadalete, which enters the Bay of Cádiz, is a shallow, sluggish stream; the Odiel and the Rio Tinto are rapid torrents, and their estuary, below Huelva, has been choked up by the sediment brought down by them; while Palos, so famous as the port from which Columbus started upon his great voyage of discovery, has dwindled down to a poor fishing village.

But what are these changes compared with the great revolution which joined the Mediterranean to the Atlantic? There can be no doubt that a barrier of mountains separated the two seas. The destructive action of the Atlantic appears to have been facilitated not only by the cavernous nature of the rocks on both sides of the strait, but also by the fact of the level of the Mediterranean having been much lower at that time than that of the Atlantic. Even now the waters of the latter sometimes rush through the strait with astounding velocity (see Fig. 6, p. 26). We cannot tell whether the strait has increased in width during historical times, for ancient geographers are not very precise in their measurements. Thus much, however, is certain, that the general features of the strait have not changed, and the two pillars of Hercules, Calpe and Abyla, may still be recognised in modern Gibraltar and Ceuta.

The rock of Gibraltar does not form the southernmost promontory of Iberia, but, being the most striking object along the strait, it has given its name to it. Mariners look upon it as the true boundary between the Mediterranean and the Atlantic, and it has been likened, not inaptly, to a crouching lion guarding the gateway between the two seas. It rises almost perpendicularly on the east, and the town, with most of the batteries, has been constructed on the western slope, which is more accessible. The famous rock, though a natural dependency of Spain, has become, by right of conquest, one of the great strongholds of England, and its

importance as a fortress as well as a place of commerce is indisputable. In its caverns have been discovered stone implements and the skeletons of dolichocephalous men.

The frequent intercourse between Andalusia and the Berber countries on the other side of the strait is explained by vicinity as well as by similarity of climate. Algarve, Huelva, and the lower valley of the Guadalquivir, as far as Seville and Ecija, that "stewing-pan" or "furnace" of Spain, form one of the hottest districts of Europe, and the coast, from Algeciras and Gibraltar to Cartagena, Alicante, and the Cabo de la Nao, is hardly inferior to it. The country around the Bay of Cádiz and the hilly districts in the extreme south, which are freely exposed to the *virazon*, or sea breeze, enjoy a more temperate climate. In the two torrid coast regions delineated above frosts are hardly known, and the mean temperature of the coolest month reaches 54° F. The heat is greatest around the bays exposed to the full influence of the hot African winds, and least on the Atlantic seaboard, where westerly breezes moderate it. Contrary atmospheric currents naturally meet in the Strait of Gibraltar, where the wind is generally high, and tempests are frequent in winter. Westerly winds prevail during winter, easterly winds in summer. The two promontories of Europe and Africa are looked upon by mariners as trustworthy signallers of the weather: when they are wrapped in clouds or mists rain and easterly winds may be looked for, but when their profiles stand out clearly against the blue sky it is a sure sign of fine weather and westerly winds.*

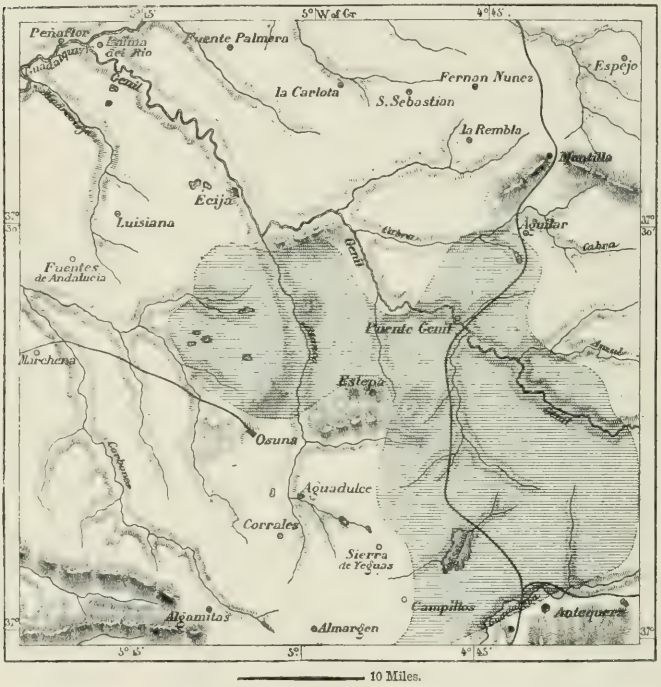
The dry and semi-tropical climate of Lower Andalusia frequently exercises a most depressing influence upon Northern Europeans. In the plain and along the coast it hardly ever rains during summer, and the heat is sometimes stifling, for the trade winds of the tropics are unknown. At Cádiz the land wind blowing from the direction of Medina Sidonia, and hence known as *sidonia*, is suffocating, and quarrels and even murders are said to occur most frequently whilst it lasts. But the most dreaded wind is the *solano* or *levante*, which is hot as the blast from a furnace. A curious vapour, known as *calina*, then appears on the southern horizon, the air is filled with dust, leaves wither, and sometimes birds drop in their flight as if suffocated.

In the temperate regions of Europe summer is the season of flowers and foliage, but in Andalusia it is that of aridity and death. Except in gardens and irrigated fields all vegetation shrivels up and assumes a greyish tint like that of the soil. But when the equinoctial autumn rains fall in the lowlands, and snows in the mountains, the plants recover rapidly, and a second spring begins. In February vegetation is most luxuriant, but after March heat and dryness again become the order of the day. Indeed, Andalusia suffers from a want of moisture. There are steppes without water, trees, or human habitations, the most extensive being on

	Mean Annual Temp.	Rainfall. Year.	Rainfall. Oct.–March.	Rainfall. April–Sept.
* Granada	66° F.	48·5 in.	40·3 in.	8·2 in.
Seville	68 „	20·1 „	20·1 „	[illegible] „
Gibraltar . .	70 „	25·3 „	20·3 „	5·0 „

the Lower Genil, where the depressions are occupied by salt lakes, as in Algeria or Persia, and cultivation is impossible. Another steppe of some extent stretches to the east of Jaen, and is known as that of Mancha Real. The barren tracts on the Mediterranean slopes are relatively even of greater extent than those in the basin of the Guadalquivir. The volcanic region of the Sierra de Gata is a complete desert, where castles and towers erected for purposes of defence are the only buildings. Elsewhere the coast is occupied by saline plains, which support a vege-

Fig. 152.—The Steppes of Ecija.
Scale 1 : 750,000.



tation mainly consisting of salsolaceæ, plumbagineæ, and cruciferæ, five per cent. of the species of which are African. Barilla, the ashes of which are used in the manufacture of soda, grows plentifully there.

In the popular mind, however, Andalusia has at all times been associated with fertility. Its name recalls the oranges of Seville, the luxuriant vegetation of the Vega of Granada, the "Elysian Fields," and the "Garden of the Hesperides," which the ancients identified with the valley of the Bætis. The indigenous flora entitles Andalusia to its epithet of the "Indies of Spain," and, in addition to

the tropical plants from Asia and Africa which grow there spontaneously, we meet with others which have been successfully acclimatized. Dates, bananas, and bamboos grow side by side with caoutchouc-trees, dragon's-blood trees, magnolias, chirimoyas, erythrinas, azedarachs; ricinus and stramonium shoot up into veritable trees; the cochineal cactus of the Canaries and the ground-nut of the Senegal do well; sweet potatoes, cotton, and coffee are cultivated with success; and the sugar-cane succeeds in sheltered places. The coast between Motril and Málaga is supposed to yield annually £20,000 worth of sugar.

The fauna of Andalusia presents, also, some African features. The molluscs met with in Morocco exist likewise in Andalusia; the ichneumon may be seen on the right bank of the Lower Guadalquivir and elsewhere; the chameleon is plentiful; and a species of wild goat is said to be common to the mountains of Morocco and the Sierra Nevada. Nor should we forget to state that an African monkey

Fig. 153.—Zones of Vegetation on the Coast of Andalusia.

(*Innus sylvanus*) still lives on the rock of Gibraltar, but whether he has been imported has not yet been determined.

In the dawn of European history Andalusia was probably inhabited by an Iberian race akin to that of the Basques. The Bastulæ, Basturnæ, and Bastesæ, in the hills facing the Mediterranean, and the Turdetani and Turduli of the valley of the Bætis, bore Euskarian names, as did many of their towns. But even thus early they must have been a mixed race. Celtic tribes held the hills extending to the north-west of the Bætis, in the direction of Lusitania; the Turdetani, who were relatively civilised, for they possessed written laws, permitted Phœnicians, Carthaginians, and Greeks to settle amongst them, and in the end became thoroughly Latinised. Municipal charters discovered at Málaga, and more recently at Osuna (*Colonia Julia Genitiva*), prove that the cities of this province enjoyed a considerable degree of self-government.

When the Roman world broke down, Southern Spain was invaded by Vandals,

Byzantines, and Visigoths, to whom succeeded Arabs, Berbers, and Jews. The influence exercised upon the country by the Moors—that is, by a mixed race of Arabs and Berbers—has been more abiding than that of their Teutonic predecessors. They maintained themselves for more than seven centuries, were numerous in the towns, and cultivated the fields conjointly with the ancient inhabitants of the country. When the order of exile went forth against their whole race, Moorish blood circulated in the veins of those who were charged with the execution of this harsh measure. In certain portions of Andalusia, and more especially in the Alpujarras, where the Moors maintained their independence until the end of the sixteenth century, the mixture between the two races had made such progress that religious profession, and not the colour of the skin, decided nationality. Numerous Arabic words and phrases have found their way into the Andalusian dialect, and the geographical nomenclature of many districts is Arabic rather than Iberian or Latin. Most of the large buildings in the towns are *alcazars*, or mosques, and even the style of modern structures is Arabic, modified to some extent by Roman influences. The houses, instead of looking upon the street, face an interior court, or *patio*, where the members of the family meet by the side of a cool fountain. No further ethnical element has been added to the population since the epoch of the Arabs, for the few German colonists who settled at Carolina, Carlota, and elsewhere did not prosper, and either returned to their native country or became merged in the general population.

The Andalusians have frequently been called the Gascons of Spain. They are generally of graceful and supple build, of seductive manners, and full of eloquence, but the latter is too frequently wasted upon trifles. Though not devoid of bravery, the Andalusian is a great boaster, and his vanity often causes him to pass the bounds of truth. At the same time he is of a contented mind, and does not allow poverty to affect his spirit. The mountaineers differ in some respects from the dwellers in the plains. They are more reserved in their manners, and the *Jaeanos*, or mountaineers of Jaen, are known as the Galicians of Andalusia. The beauty of the highland women is of a more severe type, and, compared with the charming Gaditanes and the fascinating *majas* of Seville, the women of Granada, Guadix, and Baza are remarkable for an air of haughty nobleness.

No doubt there are men in Bætica who work, but as a rule love of labour is not amongst the virtues of the Andalusian. The country might become the great tropical storehouse of Europe, but its immense resources remain undeveloped. To some extent this is explained by the fact that nearly the whole country is owned by great landlords. Many estates, which formerly were carefully cultivated, have been converted into sheep-walks, and for miles we meet neither houses nor human beings. The highlands, too, belong to large proprietors, but are leased to small farmers, who pay one-third of their product in lieu of rent.

The magnificent orange groves of Seville, Sanlúcar, and other towns, the olive groves, vineyards, and orchards of Málaga, supply the world with vast quantities of fruit; its productive corn-fields have made Andalusia one of the great granaries of the world; but it is mainly its wines which enable it to take a share in inter-

national commerce. Immense quantities of the wine known as sherry are grown in the vineyards of Jerez, to the east of Cádiz. Many of the vineyards belong to Englishmen, and merchants of that nation are busily occupied in blending and other operations peculiar to their trade. Several wines, however, maintain their superior character to the present time. Such are the sweet *tintilla* of Rota, *manzanilla*, and *pajarete*, made from dried grapes. In spite of many malpractices, this branch of industry has exercised a most beneficial influence upon the character of the population. Santa María, on the Bay of Cádiz, is one of the great wine ports of the world, and Spain has become a formidable rival of its northern neighbour.*

The ancient manufacturing industry of the country can hardly be said to exist any longer, but mining is still carried on. Strabo exaggerates the mineral wealth of the country, which is nevertheless very great. Nearly all the productive mining districts of Southern Spain are in the hills. The Sierra de Gádor is said to contain "more metal than rock." Hundreds of argentiferous lead, copper, and iron mines have been opened there, and in the sierras of Guadix, Baza, and Almeria. Near Linares, on the Upper Guadalquivir, there are lead mines yielding about 210,000 tons annually. The silver mines of Constantina and Guadalcanal, in the Sierra Morena, are being worked only at intervals. The coal basins of Bélmez and Espiel, to the north of Córdova, promise to become of great importance, although the output at present hardly exceeds 200,000 tons a year. Deposits of iron and copper exist near them.

But of all the mines of Spain those situated in the province of Huelva are the most productive. The Silurian rocks there are wonderfully rich in pyrites of copper. The mines of Rio Tinto strike the beholder by their stupendous extent; and the existence of ancient galleries, buildings, and inscriptions proves that they have been worked since the most remote time. The invasion of the Vandals temporarily put a stop to the work, which was only resumed in 1730. The two principal deposits have been computed to contain no less than 300,000,000 tons of ore. The deposits at Tharsis are much less extensive, but within easier reach of Huelva. They contain 14,000,000 tons of iron and copper pyrites, and are worked like an open quarry. The deposit is no less than 450 feet in thickness, and some of the ores yield twenty per cent. of copper. Immense heaps of scoriæ have accumulated near the mine, where they are bedded in regular strata dating back to the time of the Carthaginians. The sulphurous vapours rising from hundreds of furnaces poison the air and destroy the vegetation. The rivers Odiel and Rio Tinto run with ferruginous water which kills the fish: yellow ochre is thrown up along their banks: and in their estuary is precipitated a blackish mud consisting of the metal mixed with the sulphur of decomposed marine animals.†

* Export of wine from Cádiz and Santa María—[illegible] gallons, 1872, [illegible] gallons; 1873, 10,446,480 gallons, valued at £2,937,000.

† In 1873 [illegible] tons of pyrites were exported from the district of Huelva, of which [illegible] came from the mine of Tharsis.

Andalusia, though a desert in comparison with what it might be, rivals Italy in the fame and beauty of its cities. The names of Granada, Córdova, Seville, and Cádiz awaken in our mind the most pleasing memories, for these old Moorish towns have become identified with a great advance in arts and science.

Fig. 154.—The Mines of Huelva.

Scale 1 : 487,300.

Their advantageous geographical position accounts for their prosperity, past and present. Córdova and Seville command the fertile plain of the Guadalquivir, and the roads crossing the gaps of the neighbouring mountains converge upon them; Granada has its plentiful supply of water and rich fields; Huelva, Cádiz,

PEASANTS OF CORDOVA, ANDALUSIA

Málaga, and Almeria are considerable seaports; and Gibraltar occupies a commanding position between two seas. There are other towns less populous, but of great strategical importance, as they command the roads joining the valleys of the Genil and Guadalquivir to the sea.

Amongst the smaller towns which have played a part in history are several to the east of Granada, such as Velez Rubio and Velez Blanco, on the Mediterranean slope; Cullar de Baza, with its subterranean houses excavated in the gypsum, on the western slope of the *Vertientes*, or "the water-shed;" Huescar, the heir of an old Carthaginian city; and Baza, environed by a fertile plain known as *Hoya*, or "the hollow."

Granada, though it celebrates the anniversary of the entrance of Ferdinand and Isabella, is a very inferior place to what it was as the capital of a Moorish kingdom, when it had 60,000 houses and 400,000 inhabitants, and was the busiest and wealthiest town of the peninsula. It is still the sixth city of Spain, but thousands of its ragged inhabitants live in hideous dens, and close to the picturesque suburb of Albaicin a mob largely composed of gipsies has settled down in nauseous caverns. Remains of Moorish buildings are met with only in the suburb named, but at some distance from the city there still exist edifices which bear witness to the glorious reign of its ancient masters. The *Torres Vermejas*, or "red towers," occupy a hill to the south; the *Generalife*, with its delightful gardens, crowns another hill farther east; and between both rise the bastions and towers of the *Alhambra*, or "red palace," even in its present dilapidated condition one of the masterpieces of architecture, which has served as a pattern to generations of artists. From the towers of this magnificent building we enjoy a prospect which indelibly impresses itself upon the memory. Granada, with its towers, parks, and villas, lies beneath. The course of the two rivers, Genil and Darro, can be traced amidst the foliage, whilst naked hills bound the verdant plain of La Vega, which has been likened to an "emerald enchased in a sapphire." The contrast between these savage mountains and the fertile plain, between the beautiful city and precipitous rocks, struck the Moors with admiration, for they saw reflected in them their own nature—an outward impassiveness and a hidden fire. Granada, to them, was the "Queen of Cities," the "Damascus of the West." Nor are the modern Spaniards behind them in their admiration of Granada and its vicinity.

There are other beautiful towns in the basin of the Genil, but none can compare with Granada, not even Loja, a "flower in the midst of thorns," an oasis surrounded by rugged rocks and savage defiles. Jaen, however, almost rivals Granada. It, too, was the seat of a powerful Moorish king, the hills surrounding it are still crowned with the ruins of fortifications buried beneath luxuriant foliage, and the aspect of the town remains oriental to this day.

The upper valley of the Guadalquivir abounds in cities. Baeza had more than 150,000 inhabitants in the time of the Moors, but wars depopulated it, many of the people removing to Granada. Close by is Ubeda, another Moorish town. Higher up in the hills is the mining town of Linares, hardly large enough to

shelter 8,000 residents, but actually inhabited by 40,000. In descending the river we pass Andújar, famous on account of its *alcarrazas*, and about twenty miles below the town of Montoro we reach the marble bridge of Alcolea, celebrated for the many battles which have been fought for its possession.

Córdova dates back to the dawn of civilisation. It has been famous and powerful at all times, and the Spanish noblemen are proud of tracing their origin back to this fountain-head of the "blue blood" (*sangre azul*) which is supposed to flow in the veins of Spanish nobles. It was under the Moors that Córdova reached the apogee of its grandeur; from the ninth century to the close

Fig. 155.—The Alhambra.

of the twelfth it had nearly a million of inhabitants; and its twenty-four suburbs spread far and wide over the plain and along the lateral valleys. The wealth of its mosques, palaces, and private houses was prodigious; but, more glorious still, Córdova could boast of being the "nursery of science," for it was the greatest university of the world, abounding in schools and libraries. Civil wars, foreign invasions, and religious fanaticism led to the dispersion of its libraries, and Córdova can no longer boast of being the first city of Andalusia. Most of the old monuments have perished, but there still exists the marvellous *mezquita*, or mosque, built at the close of the eighth century by Abder-rahman and his son. The

interior was fitted up in the most lavish manner, the floors being paved with silver, and the walls covered with gold, precious stones, ivory, and ebony, but a considerable portion of the building has been pulled down to make room for a Spanish cathedral.

The more fertile districts of the province of Córdova are at some distance from the Guadalquivir, in the hills to the south. Montilla, one of the towns there, is noted for its wines, as are Aguilar, Baena, Cabra, and Lucena, the latter boasting likewise of some manufactures. Between Córdova and Seville, a distance of over ninety miles, following the sinuosities of the river, we do not meet with a single town of note, for even Palma del Rio, at the mouth of the Genil, is only a small place, though of some importance as the outlet of Ecija, a large town higher up the Genil.

Seville, the reigning queen of Andalusia, boasts of a few remarkable buildings, including the alcazar, a gorgeous cathedral, and the palace known as "Pilate's House," in which the Renaissance is admirably wedded with the Moorish style. But more famous than either of these is *Giralda's Tower*, with the saint's revolving statue on the top, like a weathercock. But neither these buildings nor Murillo's fine paintings have won Seville its epithet of "Enchantress." For this it is indebted to its gaiety and to a succession of fêtes, amongst which bull-fights figure prominently. Seville became Spanish about the middle of the thirteenth century. Its citizens valiantly defended their municipal liberties against the King of Castile, but they were defeated, and most of its inhabitants then fled to Barbary. The town was repeopled by Christian emigrants. Triana, however, a suburb with which an iron bridge connects it, is inhabited by gipsies, whose secret tribunal has its seat there. A short distance to the north of Triana are the ruins of the amphitheatre of Italica, the old rival of Seville, and the native town of Silius Italicus, and of the Emperors Trajan, Hadrian, and Theodosius. Coria, another Roman city, which had its own mint during the Middle Ages, lies below Seville.

Seville has numerous potteries, but its silks and stuffs interwoven with gold and silver have ceased to command the markets of the world. The largest manufactory of the place, that of tobacco and cigars, is carried on by Government, and employs several thousand workmen.

Alcalá de Guadaira, to the south-east of Seville, supplies the latter with bread, and its delicious springs feed the aqueduct known as Arcos de Carmona, thus called because it runs parallel with the old Roman road leading to Carmona (Carmo).

The towns to the south of Seville are no longer of importance. Utrera, the most considerable amongst them, is a great railway centre, where the line to the marble quarries of Moron, and that passing through the fertile districts of Marchena and Osuna, branch off from the Andalusian main line. The town is well known to *aficionados*, or sportsmen, on account of the wild bulls which pasture in the neighbouring *marismas*. Lebrija, with its fine tower imitated from that of Giralda, is still nearer to these marshes, which extend almost to the mouth of the Guadalquivir.

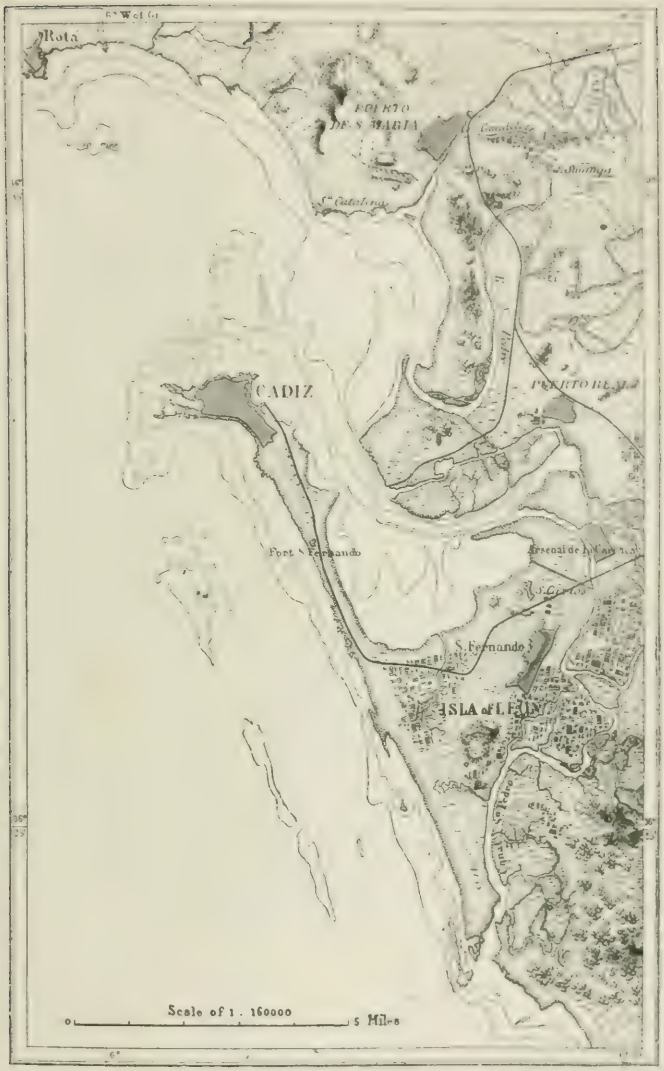
Sanlúcar de Barrameda, at the mouth of the Guadalquivir, with its white and pink houses shaded by palms, is not now the great port it was in the time of the Arabs. It may justly boast of having sent forth, in 1519, the first vessel which circumnavigated the globe, but it is now rather a pleasure resort than a place of commerce. Jerez de la Frontera, in the basin of the Guadalete, is the busiest town between Seville and Cádiz. It is a neat and showy place, surrounded by immense *bodegas*, or wine vaults, in which are stored the wines grown in the fertile valley of Guadalete, and known as sherry. Near Arcos de la Frontera, in the upper part of the valley, is pointed out the site upon which was fought the famous battle which delivered Spain to the Mussulmans.

The Bay of Cádiz, so well sheltered against winds and waves by the tongue of land which begins at the island of Leon, is surrounded by numerous towns, forming, as it were, but a single city. Rota, on the northern coast of the bay, is encircled by walls of cyclopean aspect. It is the resort of fishermen, and its vintners, though reputed Bœotians, produce one of the best wines of Spain. Farther south, at the mouth of the Guadalete, is the Puerto de Santa María, with its wine stores, at all times a bustling place. Puerto Real, the *Portus Gaditanus*, lies in a labyrinth of brackish channels, and is now merely a landing-place. The neighbouring dockyard, known as *Trocadero*, and the arsenal of Carraca, are frequently inhabited only by galley-slaves and their gaolers. The salt-pans near that place are most productive.

San Fernando is the most important town on the island of Leon, to the south of Cádiz. The initial meridian of Spanish mariners is drawn through its observatory. Looking across the navigable channel of San Pedro, which separates the island from the main, we perceive the villas of Chiclana, famous as the training-place of the *toreros*, or bull-fighters, of Andalusia. Turning to the north, we reach the narrow ridge of the Arrecife, which may be likened to a stalk with Cádiz as its expanded flower. Boatmen point out the supposed ruins of a temple of Hercules, now covered by the sea; and thus much is certain, that the land is at present subsiding, though this subsidence must have been preceded by an upheaval, as the peninsula upon which Cádiz has been built rests upon a foundation of shells, oysters, and molluscs.

We pass several forts, cross the ramparts of the Cortadura, erected in 1811, and at length find ourselves in the famous city of Cádiz, the heir of the Gadir of the Phœnicians, called Gadira by the Greeks, and Gades by the Romans. Cádiz was the leading city of Iberia when that country first became known. Like other cities, it has known periods of decay, but its great geographical advantages have always enabled it to recover quickly. It is the natural outlet of an extensive and fertile region, and its position near the extremity of the continent enables it successfully to compete with Lisbon for the trade of the New World. Palos may boast of having sent forth the *caravelas* which discovered the West Indies, but it was Cádiz which reaped all the advantages of this discovery, more especially since the Tribunal of the Indies was transferred to it from Seville (1720). In 1792 Cádiz exported merchandise valued at £2,500,000 sterling to America,

Fig. 156.—Cadiz and its Environs.



and received precious metals and other articles of a value of £7,000,000 in return. Soon afterwards Spain paid for a commercial monopoly maintained during three centuries by the sudden loss of her colonies, and Cádiz found itself dependent upon its fisheries and salt-pans. But recently fortune has again smiled upon the city, and its harbours are crowded with merchantmen.* Cádiz, with the towns surrounding its bay, has a population of 200,000 souls. The site of the city proper is limited by nature, and its houses have been built to a height of five and six stories. The inhabitants are fond of pleasure, vivacious, and quick at repartee. They have at all times shown themselves to be good patriots, and it was on the island of Leon that the Cortes met to protest against the occupation of the country by the French.

Almeria, on the Mediterranean coast of Andalusia, rivalled Cádiz in importance as long as it remained in the possession of the Moors, but prosperity fled the place immediately the Spaniards occupied it. Subsequently the town suffered greatly from the pirates of Barbary, as is proved by the fortress-like cathedral built in the sixteenth century. The aspect of the place, with its narrow streets and old *kasba*, is quite oriental.

The towns to the west of Almeria have a tropical climate and tropical productions. Dailas, said to be the first permanent settlement of the Arabs, is famous for its raisins; to it succeed Adra, at the mouth of the Rio Grande of Alpujarra, Motril, Velez Málaga, and Málaga, embosomed in gardens watered by the Guadalmedina.

Málaga, like most of the ports on that coast, is of Phœnician origin, and the most populous town of Andalusia. Less rich than Granada, Córdova, and Seville in Moorish monuments, or than Cádiz in historical traditions, it is indebted to its port and to the fertile country surrounding it for its commercial pre-eminence. Its exports, consisting of raisins (*pasas*), almonds, figs, lemons, oranges, wine, olive oil, &c., are the product of the immediate vicinity. There are foundries, sugar refineries, and factories. Seen from the sea, the cathedral appears to be almost as large as the rest of the town, but in the latter must be included not only the houses standing at the foot of the citadel of Gibralfaro, but also the numerous villas dotting the surrounding hills. Nay, even the picturesque towns and watering-places in the neighbouring mountains, such as Alora, Alhaurin, Carratraca, and Alhama, may be looked upon as dependencies of the city, for scarcely any but *Malagueños* resort to them.

Antequera and Ronda, in the interior of the country, belong to the basin of the Mediterranean, for the one stands on the Guadalhorce, which enters the sea near Málaga, whilst the other occupies a position in the upper basin of the Guadiaro, which washes the foot of the hills of San Roque, to the north of Gibraltar. Antequera is one of the most ancient towns of Spain, and acts as an intermediary between Málaga and the valley of the Guadalquivir. On a hill near it stands a curious dolmen, twenty feet in height, known as *Cueva del Mengal*.

* In 1874 3,639 vessels, of 616,060 tons burden, entered; the imports had a value of £633,700, the exports (consisting for the most part of wine) of £3,116,000.

The picturesque Moorish town of Ronda is surrounded on three sides by a gorge 600 feet in depth, 120 to 300 feet wide, and spanned by three bridges, one Roman, one Arab, and the last (built 1740—88) Spanish. Ronda still possesses some

FIG. 137.—GIBRALTAR.

strategical importance, for it defends the road leading from the valley of the Genil to that of the Guadiaro. The *Rondeños* are noted for the skill with which they train horses for mountain travel. They are notorious smugglers, as are also many

of the inhabitants of the small seaport towns of Marbella, Estepona, and Algeciras, near Gibraltar.*

The rock of Gibraltar, of which the English obtained possession in 1704, has not only been converted into a first-rate fortress, but is likewise a busy place of commerce. Gibraltar produces nothing except a little fruit, and most of its provisions, including meat and corn, are imported from Tangiers, in Morocco. The inhabitants of the town are dependent for their support upon passing vessels, the English garrison, and a brisk contraband trade with Spain. Gibraltar affords very indifferent shelter, and only one-fourth of the vessels passing through the strait call there, and even these generally confine themselves to replenishing their stock of coal. Nor is a residence on this picturesque rock very pleasurable, for fevers prevail, and the military character of the place entails numerous restrictions. During the heat of summer many of the English residents—facetiously called "lizards of the rock"—seek refuge at San Roque, a village to the north of the bay, the neighbourhood of which affords excellent sport.†

IV.—The Mediterranean Slope of the Great Plateau. Murcia and Valencia.‡

In a few hours we are able to travel from the inhospitable plateaux to the hot valleys and plains of Murcia and Valencia debouching upon the Mediterranean.

The spurs from the Sierra Nevada, which approach the coast to the north of the Cabo de Gata, are separated by *ramblas*, or torrent beds, and gradually decrease in height as we proceed north. The torrent of Almanzora separates the Sierra de los Filabros from its northern continuation, the Sierra de Almenara, which for a considerable distance runs parallel with the coast. It sends out a spur in the direction of Cartagena, which terminates in Cabo de Palos. The inland ranges run almost parallel with this coast range, and are separated by longitudinal valleys opening out into the great transverse one of the Segura. These ranges are the Sierra de María, "el Gigante" (4,918 feet), with the Sierra de Espuña (5,190 feet), the Sierra de Taibilla, the Calar del Mundo (5,440 feet), and the Sierra de Alcaraz

* Approximate population of the principal towns of Andalusia:—

Cádiz, 62,000; Jerez, 35,000; Chiclana, 22,000; Puerto de Santa María, 18,000; San Fernando, 18,000; Sanlúcar de Barrameda, 17,000; Puerto Real, 14,000; Arcos de la Frontera, 12,000; Algeciras, 18,000; Medina Sidonia, 10,500.

Huelva, 10,000.

Seville (Sevilla), 80,000; Ecija, 24,000; Carmona, 18,000; Osuna, 16,000; Utrera, 14,000; Lebrija, 12,000; Marchena, 12,000.

Córdova, 45,000; Lucena, 16,000; Montilla, 15,500; Montoro, 12,000; Aguilar, 12,000; Baena, 14,500; Cabra, 11,500.

Jaen, 18,000; Linares, 40,000; Ubeda, 15,000; Baeza, 15,000; Alcalá la Real, 11,500; Andújar, 9,500.

Granada, 65,000; Loja, 15,000; Motril, 13,500; Baza, 13,500.

Málaga, 92,000; Antequera, 30,000; Velez Málaga, 15,000; Ronda, 14,000.

Almeria, 27,000; Velez Rubio, 13,000.

† Gibraltar in 1871 had 16,454 inhabitants, exclusive of the military; its annual revenue exceeds £40,000, and the burden of the vessels which enter and clear annually amounts to 3,500,000 tons.

‡ Murcia . . . . 10,450 square miles. 660,040 inhabitants, or 63 to a sq. m.
Valencia . . . 8,896 „ 1,401,833 „ 158 „

GIBRALTAR, AS SEEN FROM THE "LINES."

(5,910 feet). The ranges to the north and east of the Segura must be looked upon as continuations of those mentioned. They attain their greatest altitude in the Moncabrer (4,543 feet), and their spurs form several notable promontories, amongst which are the volcanic Peñon de Ifach and the Cabos de la Nao and San Antonio. Near the latter rises the Mongo (2,337 feet), which has become known as a crucial trigonometrical station.

The mountains which dominate the valley of the Júcar present the feature of a denuded plateau, above which rise a few isolated summits. The aspect of the basin of the Guadalaviar is far more mountainous. On the west it is bounded by the sierras having their nucleus in the Muela de San Juan (5,280 feet), and to the east rise the imposing mountain masses of the Javalambre (6,569 feet) and Peña Golosa (,942 feet). The summits of the range which extends from the latter to the great bend of the Lower Ebro, such as the Muela de Ares (4,332 feet), the Tosal de Encanades (4,565 feet), and Bosch de la Espina (3,868 feet), bear Catalan names. A range of inferior heights runs parallel with it along the coast, the interval between the two forming a strath, or vale. This coast range terminates abruptly in the Sierra de Montsia (2,500 feet), close to the delta of the Ebro, and before the pent-up waters of the river had excavated themselves a path to the sea it extended right to the Pyrenees.

All these mountains are for the most part naked, and shrubs appear like black patches upon their whitish slopes. They stand out clearly against the blue and limpid sky, whose transparency has won Murcia the title of the "most serene kingdom." The climate in the valley of the Segura is even more African in its character than that of Andalusia. There are only two seasons, summer and winter, the latter lasting from October to January, but the temperature throughout the year is equable, owing to the mistral which blows from the cool plateau and the sea breezes.

The flora, especially along the coast of Murcia, is a mixture of tropical and temperate plants. There are trees which shed their leaves in winter, others which retain their foliage throughout the year, and by the side of wheat, rice, maize, olives, oranges, and grapes are grown cotton, sugar-cane, sweet potatoes, nopals, agaves, and dates. Tropical diseases have found a congenial soil in this country. Yellow fever has been imported occasionally from America. The putrefying substances left upon the fields after floods poison the air, and the brackish waters of the lagoons, or *albuferas*, are the breeding-places of fever. The salt lakes to the south of the Segura, however, exercise no deleterious influence upon the climate.

Nowhere else in Spain is the rainfall so inconsiderable. Between Almeria and Cartagena only eight inches fall during the year; in the environs of Alicante and Elche the rains are, perhaps, a trifle more copious; and at Murcia and Valencia, which lie at the foot of mountains that intercept the moisture-laden winds, they are more abundant still, though even there they do not exceed eighteen inches. Moreover, most of the rain is immediately absorbed by the thirsty air, and only a very small quantity finds its way through *ramblas* to the sea. The quantity is altogether insufficient for agricultural purposes, and if it were not for the rivers the

The people of Murcia cannot be said to have issued victoriously from the struggle against barren rocks, desiccating winds, and a dry atmosphere. They abandon themselves to a fatalism quite oriental, and make hardly any effort at improvement. Lazily inclined, they take their siesta in and out of time, and even when awake preserve an aspect of impassiveness as if they pursued a reverie. They are not much given to gaiety, and, though neighbours of Andalusia and La Mancha, do not dance. They are full of rancour and savage hatred when offended, and have

Fig. 159.—The Palm Grove of Elche.

exercised but small influence upon the destinies of Spain. They cannot compare in industry with Catalans, Navarrese, and Galicians, nor in intelligence with natives of any other part of Spain. The Valencians, on the other hand, are an industrious race. They not only cultivate their plains, but scale the barren slopes of the rocks with their terraced gardens. They are a gay people, famous for their dances. Ferocious instincts are asserted to underlie this outward gaiety, and a proverb says that "the paradise of La Huerta is inhabited by demons." Human life is held very

PEASANTS OF LA HUERTA, AND CIGARRERA OF VALENCIA.

cheaply at Valencia. Formerly that town supplied the courtiers of Madrid with hired assassins, and the numerous crosses in and around it are evidence of so many murders committed in the heat of passion. In Valencia, however, the use of the knife is a tradition of chivalry, as are duels in some other parts of Europe. The conscience of the murderer is perfectly at ease; he wipes the blood-stained knife upon his girdle, and immediately afterwards cuts his bread with it. The dress of the Valencians consists of loose drawers confined round the waist by a red or violet scarf, velvet waistcoats with pieces of silver, white linen gaiters leaving the knees and ankles bare, a bright kerchief wrapped round the shaved head, and a low hat

Fig. 160.—The Palm Grove of Elche and the Huertas of Orihuela.

Scale 1 : [illegible]

with brim turned up and ornamented with ribbons. A many-coloured cloak with a broad fringe completes this costume, and, draped in it, even the meanest beggar possesses an air of distinction. In their customs and modes of thought the Valencians differ equally from their neighbours. They speak a Provençal dialect, mixed with many Arabic words, but more closely related to the language of the troubadours than the dialect of the Catalans.

Agriculture is the leading pursuit of Valencia and Murcia, and a few branches of industry are carried on. Many hands are occupied in making the white wines of Alicante and the red ones of Vinaroz and Benicarlo; the grapes of the vineyards of Denia, Javea, and Gandia, to the north of Cabo de la Nao, are converted

by a complicated process into raisins; and the *esparto grass* growing abundantly on the sunny slopes of Albacete and Murcia is employed in the manufacture of mats, baskets, sandals, and a variety of other objects.* There are hundreds of metalliferous lodes, but only the lead mines in the hills of Herrerías, to the east of Cartagena, are being worked on a large scale, and that by foreigners. Zinc has been worked since 1861, and mines of copper, lead, silver, mercury, and rock-salt

Fig. 161.—Ruins of the Dyke of the Reservoir above Lorca.

abound at some distance from the coast; but, from want of means of communication, their exploitation would not pay.

Valencia is the more industrial province of the two. Albacete manufactures the dreaded *navajas*, or long knives; Murcia has silk-mills; Cartagena rope-walks and other establishments connected with shipping; Játiva has a few paper-mills; but Valencia and Alcoy are now the great centres of industry. The former manu-

* 82,000 tons of esparto grass are estimated to have been collected in 1873, of which 67,000 tons were exported to England.

factures the plaids worn by the peasantry, silks and linens, earthenware and

Fig. 162.—Peasants of Murcia.

glazed tiles. Alcoy supplies most of the paper for making Spanish cigarettes.

The towns of Albacete and Almansa are important, as lying on the great high-road which connects the plateau of La Mancha with the Mediterranean seaboard. But they cannot vie in wealth and population with the towns situated on the coast, or within twenty-five miles of it. Lorca, the southernmost of these towns, lies picturesquely on the slopes and at the foot of a hill crowned by a Moorish citadel. The old town, with narrow tortuous streets and the remains of Arab palaces, has been given up to Gitanos, and a new town with wide and straight streets built in the fertile plain irrigated by the Guadalentin. A fine road joins Lorca to the small harbour of Aguilas, twenty miles to the south.

In descending the valley of the Guadalentin we pass Totana, the head-quarters of the Gitanos of the country, and Alhama, well known on account of its hot springs, and finally enter the mulberry and orange groves which surround the capital of the province. Murcia, though an extensive city, hardly looks like it, for its streets are deserted, its houses without beauty, and the only objects of interest are the cathedral, the shady walks along the banks of the Segura, and the canals irrigating the terrace gardens. Far more interesting is the neighbouring Cartagena, which was destined by its Punic founders to become a second Carthage in truth, and its magnificent harbour certainly affords great advantages for commercial and military purposes. The discovery of the rich lead and silver mines near the town contributed much towards its prosperity. Successive Spanish Governments have attempted to restore to Cartagena its ancient strategical importance. They have constructed docks and arsenals, and erected impregnable fortifications, but, in spite of this, the population of the town is hardly a third of what it was in the middle of the eighteenth century. The character of its commerce is almost local, notwithstanding its excellent port, and esparto grass, mats, fruits, and ore constitute the leading articles of export.

Alicante, though far less favoured by nature, is a much busier place, thanks to the fertility of the huertas of Elche, Orihuela, and Alcoy, and the railway which connects it with Madrid. Only small vessels can approach the quays and piers of the town, nestling at the foot of a steep rock crowned by a dismantled citadel. Larger vessels are compelled to anchor in an open roadstead. Other coast towns of Valencia, such as Denia and Cullera, offer still less shelter, but are nevertheless much frequented by coasting vessels. Formerly vessels which entered the Bay of Valencia during winter were bound to exercise the greatest caution, owing to violent easterly and north-north-easterly winds and fogs, for there existed not a single port of refuge. This want has now been supplied by the construction of a port at the mouth of the Guadalaviar, known as El Grao (strand) de Valencia.

Valencia, the fourth city of Spain in population, is the natural centre of the most fertile huertas. The "City of the Cid" still preserves its crenellated walls, turrets, gates, narrow and tortuous streets, balconied houses, the windows of which are shaded by blinds, and awnings spread over the streets to protect passers-by from the rays of the sun. Amongst its numerous buildings there is but one which is really curious: this is the *Lonja de Seda*, or silk exchange, a graceful structure of the fifteenth century. Gardens constitute the real delight of Valencia, and

the Alameda, which extends along the banks of the Guadalaviar, is, perhaps, the finest city promenade in Europe. The commerce of Valencia rivals that of Cadiz.*

To the north of Valencia the cultivable country along the coast is narrow, and incapable of supporting large towns. Castellon de la Plana, at the mouth of the Mijaros, has attained a certain importance, but farther north we only meet with small places inhabited by fishermen and vine-growers. Formerly the coast road was defended by castles, chief among which was Saguntum, famous for its glorious

Fig. 163.—The Harbour of Cartagena.

1 Mile.

defence against Hannibal. Its site is occupied by the modern town of Murviedro, *i.e.* "old walls," and its ruins are not very imposing.†

V.—The Balearic Islands.

The Balearic Islands are attached to the mainland of Spain by a submarine

* Value of exports and imports in 1867, £2,707,000.

† Population of the principal towns of the Mediterranean slope between Cabo de Gata and the Ebro:—Valencia, 168,000; Murcia, 55,000; Lorca, 40,000; Alicante, 31,000; Cartagena, 25,000; Orihuela, 21,000; Castellon de la Plana, 20,000; Alcoy, 16,000; Albacete, 15,000; Jativa, 14,000; Alcira, 13,000; Almansa, 9,000.

plateau, and are geographically as well as historically a dependency of Valencia and Catalonia. The ranges of hills traversing these islands have the same direction as those of Murcia and Valencia. On the other hand, the peninsula of La Baña, at the mouth of the Ebro, extends beneath the sea in the direction of Ibiza, and from this submarine tongue of land rises a group of volcanic rocks. These are the Columbretes, from the Latin *colubraria*, signifying "serpents' islets."

The Baleares are small in area, but favoured by climate, productiveness, and natural beauty. They are the "Happy Islands" of the ancients, and, compared with many of the coast lands, are indeed a favoured region. War and pestilence

Fig. 164.—El Grao de Valencia.

Scale 1 : 18,000

have been no strangers to them, but continual troubles have not interfered with their development.

The islands consist of two groups, the Pityuses, and the Baleares proper. The name of the latter is said to refer to the expertness of the natives as slingers; and, when Q. Metellus prepared to land upon them, he took care to shelter his men beneath an awning of hides. The climate is moister and more equable than that of neighbouring Spain. Violent storms occur frequently.

The structures called *talayots* (watch-towers) prove that the islands were inhabited before the historic epoch. These were built probably by the same race to whom the nuraghi of Sardinia owe their existence; but the present population is a very mixed one, for every nation of antiquity has successively invaded the island.

WOMEN OF IBIZA, BALEARIC ISLES.

The language spoken is a Catalan dialect resembling that of Limousin. The Majorcans are generally small of stature, but well proportioned, and the women of some of the districts are famed for their beauty and expressive features. The peasantry are suspicious and thrifty, but honest and hospitable; and their dress, consisting of loose breeches, a belt, a bright-coloured vest, and a goatskin cloak, is picturesque. Dancing to the music of a guitar or flute is their favourite amusement.

Ibiza (Iviza), the largest island of the Pityuses, is hardly more than fifty miles from Cabo de la Nao. Its surface is hilly and intersected by numerous torrent beds. Puerto Magno (Formany, or Grand Port) lies on the west side, and a similar bay, the trysting-place of numerous fishing-smacks, on the south side. On its shore stands the capital of the island, an ancient Carthaginian colony. A chain of islets and rocks, similar to the Adam's Bridge of Ceylon, joins the southernmost cape of Ibiza to Formentera Island. The climate is said to be so salubrious that neither serpents nor other noxious reptiles can bear it. The population is small, in spite of the fertility of the island. Watch-towers and castles of refuge near every village recall the time when the inhabitants suffered from Moorish pirates. The islanders are happy, for the central Government leaves them pretty much to themselves.

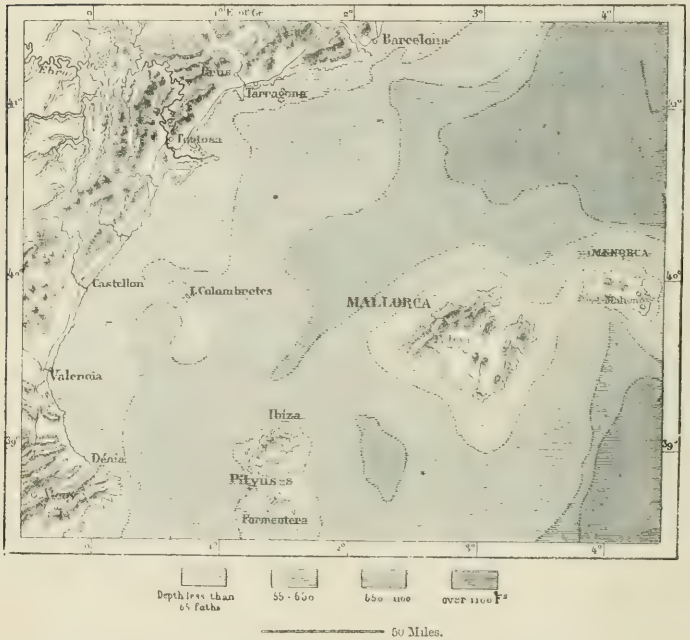
Mallorca, or Majorca, the largest of the group, is the only one which can boast of a regular range of mountains rising precipitously along the north-western coast, and culminating in the twin peaks of Silla de Torrella (4,940 feet) and Puig Mayor (4,920 feet). These mountains are amongst the most picturesque in all Europe, and from their summits may be enjoyed a magnificent prospect. The moufflon is said still to haunt their pine woods and recesses. The greater portion of the island consists of a plain lying at an elevation of 150 feet above the sea-level, and dotted over with isolated *puigs*, or conical peaks, surmounted in many instances by an old church or castle. The eastern extremity of the island is hilly, and the Bec de Farruch (1,803 feet) still bears its old Arabic name. Near it are the wonderful stalactite caverns of Arta, which extend beneath the sea. The extremities of the most depressed portion of the island open out towards two great bays, one in the north-east, the other in the south-west. Palma, the capital of the island, lies on the former of these, though the other, known as Puerto de Alcudia, would offer greater advantages were it not for the pestilential swamps which surround it. On the iron-bound northern coast there are no harbours, but coasting vessels frequent the creek of Soller, whence they export oranges.

The peasants, or *payeses*, of Majorca have the reputation of being good agriculturists, but much of the progress made is due to Catalan immigrants. The island produces delicious wines (Benisalem), olive oil, oranges, vegetables, and pigs, all of which find a market at Barcelona or in France. The corn grown is not, however, sufficient for the support of the population, and Majorcans as well as "Mahonian" gardeners are met with in every town of the Mediterranean. Bay-salt is made at Cape Salinas. Shoes, cottons, linens, baskets, and porous vases are produced; but the manufacture of *majolica* has ceased. Palma is a busy place of 40,000 inhabitants, and its bastioned walls, castle, cathedral, and amphitheatrically built houses present a fine appearance from the sea. The inhabitants are proud of

their public buildings, and assert that their *lonja* is superior to that of Valencia. The *Chuetas*, or converted Jews, are a curious element of the population. They occupy a separate quarter, marry amongst themselves, and have preserved their race distinctions and mercantile genius. A large portion of the landed property of the island has passed into their hands. A railway traversing the rich districts of Santa María and Benisalem, to the south of the populous towns of Manacor and Felanitx, connects Palma with Alcudia.*

Menorca, or Minorca, twenty-four miles to the east of Majorca, is generally

Fig. 165.—The Balearic Islands.
Scale 1 : 3,700,000.



level, its culminating point, Monte Toro, in the centre of the island, only attaining a height of 1,171 feet. The strong northerly winds which sweep over its plains cause the trees to turn their branches in the direction of Africa, and orange-trees find shelter only in the *barrancas*, or ravines, which intersect them. The climate is less pleasant than that of the neighbouring island, and the soil less fertile, for, consisting for the most part of limestone, it rapidly absorbs the rain. There are two ports and two cities, one at each extremity of the island, which from time

* Towns of Majorca:—Palma, 40,000; Manacor, 15,000; Felanitx, 10,500; Lluchmayor, 8,800; Pollenza, 8,000; Inca, 8,000; Soller, 8,000; Santañia, 8,000.

immemorial have claimed precedence. Ciudadela (7,500 inhabitants) enjoys the advantage of closer proximity to Majorca, but its harbour is bad. Port Mahon (15,000 inhabitants), on the other hand, possesses an admirable port, and Andreas Doria says with reference to it that "June, July, and Mahon are the best ports of the Mediterranean." The English made Mahon a wealthy city, but its trade fell off immediately when they abandoned it in 1802.

Fig. 106.—View of Ibiza.

VI.—The Valley of the Ebro. Aragon and Catalonia.

The central portion of the valley of the Ebro is as distinctly separated from the remainder of Spain as is that of the Guadalquivir. It forms a vast depression, bounded by the midland plateau of Spain and the Pyrenees, and if the waters of the Mediterranean were to rise 1,000 feet, this ancient lake, which existed until its pent-up waters had forced themselves a passage through the mountains of

Catalonia, would be converted into a gulf of the sea. The Pyrences in the north, the barren slopes of the plateaux to the south and south-west, form well-defined boundaries, but in the north-west the plain of the Ebro extends beyond Aragon, into a country inhabited by men of a different race.

Fig. 167.—The Pityuses.
Scale 1 : 400,000.

Historically and geographically, Aragon and Catalonia form one of the great natural divisions of Spain, less extensive than the Castiles, but hardly less important, and far more densely populated.* The political destinies of Aragon and Catalonia have been the same for more than seven centuries, but, in spite of this,

* Catalonia, 12,483 square miles, 1,778,408 inhabitants; Aragon, 17,676 square miles, 928,718 inhabitants.

there exist great contrasts, which have not been without their influence upon the character of the population. Aragon, a country of plains surrounded by mountains, is an inland province, and its inhabitants have remained for the most part herdsmen, agriculturists, and soldiers. Catalonia, on the other hand, possesses an admirable seaboard. Its natural wealth, joined to favourable geographical position, has developed commerce with neighbouring countries, and more especially with Roussillon and Languedoc. Indeed, seven or eight centuries ago, the Catalans were Provençals rather than Spaniards, and in their language and customs they were closely related to the people to the north of the Pyrenees.

In the course of the great political revolution, the most terrible feature of which was the war of the Albigenses, Catalonia became a prey to the Castilians. As long as the Provençal world maintained its natural centre between Arles and Toulouse, the populations of the Mediterranean coasts, as far as the Ebro, Valencia, and the Baleares, were attracted towards it as to their common focus. Those Christian populations who found themselves placed between Provence on the one hand, and the Arab kingdoms on the other, naturally gravitated towards the former, with whom they possessed community of race, religion, and language. Hence the wide range of the idiom known as Limousin, and its flourishing literature. But when an implacable war had converted several towns of the Albigenses into deserts; when the barbarians of the North had destroyed the civilisation of the South, and the southern slopes of the Cévennes had been reduced by violence to the position of a political dependency of the valley of the Seine, Catalonia was forced to look elsewhere for natural allies. The centre of gravity was shifted from the north to the south, from Southern France to the peninsula of the Pyrenees, and Castile secured what Provence had lost.

The plateau to the south of the Ebro has been cut up, through the erosive action of rivers, into elongated sierras and isolated *muelas* (molars), and its edge is marked by numerous notches, through which these rivers debouch upon the plain. The Sierra de San Just (4,967 feet), now separated from that of Gúdar by the upper valley of the Guadalupe, is a remnant of this ancient plateau, as are the Sierras de Cucalon (4,284 feet), de Vicor, and de la Virgen, which join it to the superb mass of the Moncayo, in the north-west; and the same applies to the Sierra de Almenara (4,687 feet), which rises to the west of them.

The granitic mountain mass of the Moncayo (7,705 feet) has offered greater resistance to the erosive action of the waters than have the cretaceous rocks of the plateau to the east of it. The Moncayo is the storm-breeder of the plains of Aragon, and from its summit the Castilian can look down upon the wide valley of the Ebro. To the Aragonese the plateau is accessible only through the valleys of the Guadalupe, Martin, and Jiloca, and it is these which have enabled them to obtain possession of the upland of Teruel, which is of such strategical importance, from its commanding position between the basins of the Guadalaviar, Júcar, and Tajo.

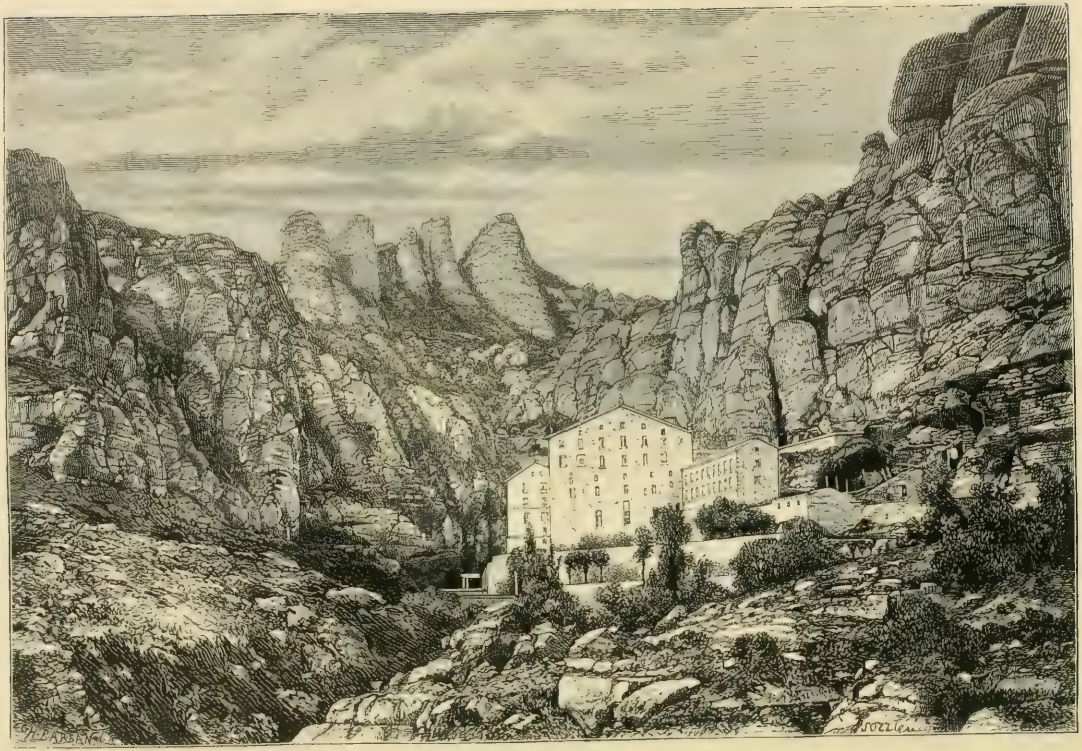
To the north of the Ebro rises the snow-clad range of the Pyrenees, which separates Spain from the rest of Europe. Several spurs descend from this master range into Aragon. But there are also independent ranges, one of which, that of

the Bardenas, rises immediately to the north of the Ebro, right opposite to the gigantic Moncayo. The parallel ridges of the Castellar and of the "district of the Five Towns" form a continuation of these hillocks to the east of the Arba, and then, crossing the valley of the Gallego, we reach the barren terraces of the Monegros, upon which rises the insular Sierra de Alcubierra, in the very centre of the ancient lake of Aragon. A saddle, elevated only 1,247 feet above the sea-level, connects the latter with the mountains of Huesca in the north.

Several mountain masses of considerable height occupy the centre of the country, and separate these riverine hills from the main range of the Pyrenees. They consist for the most part of chalk, through which the bounteous rivers

Fig. 168.—Port Mahon.
Scale 1 : 50,000.

descending from the Pyrenees have excavated their beds. These channels, with their precipices, defiles, and cascades, form one of the most picturesque mountain districts of Spain. The most famous of these Pyrenean foot-hills is the Sierra de la Peña, which is separated from the Pyrenees by the deep valley of the Aragon. At the eastern extremity of this chain, high above the ancient city of Jaca, rises the pyramidal sandstone mass of the Peña de Oroel (5,804 feet), from which we are able to embrace an immense horizon, extending from the Pyrenees to the Moncayo. The wild district which occupies the centre of this magnificent panorama is the famous country of Sobrarbe, held in high veneration by patriotic Spaniards, for it was there they commenced their struggles against the Moors.



MONSERRAT, CATALONIA.

An elevated saddle connects the Sierra de la Peña with the irregular mountain mass of the Sierra de Santo Domingo, to the south of it, whose spurs descend in terraces into the rugged plain of the Five Towns. It is separated by a narrow cleft, through which passes the Gallego from the Sierra de Guara, which extends to the river Cinca in the east, and several minor chains run parallel with it. This parallelism in the mountain ranges may be traced, likewise, as far as the river Segre.

The Monsech, thus called from its arid calcareous ravines, presents the appearance of an unbroken rampart from the south, but is intersected at right angles by the gorges of two Nogueras—the Ribagorzana and Pallaresa. The Peña de San Gervas and the Sierra de Boumort, which rise to the north of it, are much less regular in their contours, but exceed it in height.

The Pyrenees terminate with the gigantic mountains surrounding the valley of Andorra, and with the Peak of Carlitte (9,583 feet). The Sierra del Cadi (8,322 feet) belongs to a detached chain hardly inferior to them in height, and culminating on French soil in the superb pyramid of the Canigou (9,140 feet). Numerous spurs extend from this sierra towards the sea.

In this rugged mountain region we meet with geological formations of every age, from the Silurian to the cretaceous. Iron, copper, and even gold abound, and might be worked with great profit if roads and railways penetrated into the upper valleys. A coal-field on the Upper Ter, near San Juan de las Abadesas, is being worked very sluggishly, and others on the western slope of the Cadi have not even been touched. The famous rocks of salt at Solsona and Cardona lie at the foot of the Sierra del Cadi, and that of Cardona alone, though it has been worked for centuries, is estimated to contain nearly 400,000,000 cubic yards.

The abundance of mineral veins is due, perhaps, to the existence of subterranean lava lakes. The only volcanic hills in the north of Spain are those near Olot and Santa Pau, in the upper basin of the Fluvia. Immense sheets of basaltic lava have been ejected there during the tertiary age from fourteen craters, one of them, upon which stands the old town of Castelfollit, forming a huge rampart of picturesque aspect. Jets of steam issue even now from many fissures in the rocks.

The mountains along the coast of Catalonia resemble in every respect those of Valencia, from which they are separated by the gorge of the Ebro. Near the mouths of that river the rugged and mountainous region extends about thirty miles inland, as far as the Llanos del Urgel; but farther north it widens, until it finally merges in the spurs descending from the Pyrenees. The principal summits are the Mont Sant (3,513 feet), the Puig de Montagut (2,756 feet), the Monserrat (4,057 feet), and Monseny (5,276 feet). The best-known passes are at the head of the Francoli, through which runs the railway from Tarragona to Lérida, the pass at the head of the Noya, and the Pass of Calaf.

Of the last-named mountains that of Monserrat is the most famous, for suspended upon one of its flanks hang the remains of the celebrated monastery in which Loyola deposited his sword. Monserrat has lost its prestige as a holy place, but still remains one of the most interesting subjects for the study of

geologists. It consists of conglomerate, and has been worn by atmospheric agencies into innumerable pillars, pinnacles, and earth pyramids surmounted by huge boulders. Hermitages and the ruins of castles abound, and the prospect from the highest summit extends from the Pyrenees to the Balearic Isles.

Crossing the valleys of the Llobregat and Ter, we reach the swampy plain of Ampurdan, an old gulf of the sea, and with it the north-eastern extremity of Spain, separated from France by the Albères Mountains. The surrounding hills abound in the remains of ecclesiastical buildings. One of these, near Cabo de Creus, the easternmost promontory of Spain, and the Aphrodision of the ancients, marks the site of a temple of Venus.

The basin of the Ebro forms a huge triangle, the mountains of Catalonia being the base, whilst its apex lies in the hills of Cantabria, close to the Atlantic. The surrounding hills differ much in height, but the nucleus of all consists of granite, upon which have been deposited sedimentary strata, the silent witnesses of the gradual filling up of the old inland lake. The river itself traverses the very centre of this triangle, at right angles to the Mediterranean, and only when it reaches the mountain barrier separating it from the sea does it wind about in search of an outlet.

The Fontibre, or "fountain of the Ebro," gives birth at once to a considerable stream, which, fed by the snows of the Peña Labra, rushes with great impetuosity past Reinosa (2,687 feet), then passes through a succession of defiles, and finally, having received the Ega and Aragon with the Argo from the north, emerges from Navarra a great river. Below Tudela (800 feet) it is large enough to feed two canals, viz. that of Tauste, which carries fertility into the once-sterile tracts at the foot of Bardenas, and the navigable Imperial Canal, which follows the valley down to Zaragoza. The ordinary volume of the latter amounts to no less than 494 cubic feet per second, but much of this water is sucked up by the calcareous soil.

The tributary rivers which enter the Ebro in the plains of Aragon compensate for the loss sustained through canals of irrigation. The Jalon, Huerva, Martin, and Guadalupe join on the right; the Arba, Gallego, and Segre on the left. This last is the most important of all, for it drains the whole of the Pyrenean slope from Mont Perdu to the Carlitte.

The Ebro, after its junction with the Segre, immediately plunges into the coast ranges of Catalonia, and though the fall thence to the sea amounts to 183 feet in 95 miles, no rapids or cataracts are met with. The suspended matter brought down by the river has been deposited in the shape of a delta which juts out fifteen miles into the Mediterranean, covers an area of 150 square miles, and abounds in salt marshes, lagoons, and dead river arms. A canal, twenty-two miles in length, connects the harbour of refuge at Alfaques with the Ebro, but is not available for ships of great draught, owing to the bar which closes its mouth. The other embouchures of the river are likewise closed by bars.

The volume of the Ebro* decreases annually, on account of the increasing

* Area of the basin of the Ebro, 25,100 square miles; discharge during floods, 175,000 cubic feet; average, 7,100 cubic feet; during summer, 1,750 cubic feet; annual rainfall, 18 inches; surface drainage, 1·4 inches; proportion between the two, 13 : 1.

quantities of water which it is called upon to furnish for purposes of irrigation, and sooner or later it will be reduced to the condition of the rivers of Valencia.

The productiveness of the irrigated fields of Aragon and Catalonia bears witness to the fertility of the soil. Even saline tracts have been converted into gardens. Tropical plants, agaves, cacti, and a few feathery palms on the coast to the south of Barcelona recall the beautiful landscapes of Southern Spain. The valley of the Ebro holds an intermediate position between Murcia and Valencia and the bleak plateau and mountains of the interior; but water, except in the immediate neighbourhood of the rivers, is nowhere abundant. On some of the hill-tops may be seen houses the walls of which are dyed red, because it was found more economical to mix the mortar with wine than to convey thither water for that purpose. This deficiency of moisture is a great drawback to certain districts in the lower valley of the Ebro. The greater portion of Bárdenas, the Monegros, and the terraces of Calanda are treeless steppes. Cold and heat alternate abruptly, without reference to seasons, and the climate, in spite of the proximity of the sea, is quite continental in its character. The hot winds, so much dreaded on the coast of Catalonia, do not blow from Africa, but from the parched plains of Aragon.

The climate of Catalonia, owing to the breezes blowing from the Mediterranean, is far more equable than that of Aragon, and to this circumstance, no less than to differences of race and greater facilities for commerce, this province is indebted for its distinct individuality.*

Catalonia, being open to invasions from the sea as well as by land, has a much more mixed population than its neighbour Aragon. On the other hand, a conqueror once in possession of the latter had but little to fear expulsion at the hands of new-comers, and the Moors maintained themselves in Aragon three hundred years after they had been expelled from Barcelona.

The inhabitants of the valley of the Ebro are offensively haughty, of sluggish minds, given to old customs and superstitions, but they are at the same time singularly persistent, and their bravery does credit to their Celtiberian ancestors. These fine broad-shouldered men, who follow their donkeys along the high-roads, the head enveloped in a silken kerchief, and the waist confined by a violet-coloured belt, are at all times ready for a fight. Up to the close of last century it was customary to get up fights between villages in mere wantonness, and the *rondallas*, a term now employed for open-air concerts, scarcely ever terminated without bloodshed. In trifles the Aragonese are as stubborn as in matters of importance, and they are said to "drive in nails with their head." For several centuries the Aragonese struggled with the Moors, and the kings, dependent as they were upon the support of the people, felt constrained to submit to a considerable limitation of their power. It was Philip II. of Castile who suppressed these ancient provincial privileges, and condemned Aragon to lead a life of intellectual stagnation.

The Catalans are as self-opinionated as their neighbours the Aragonese; noisy quarrels frequently take place amongst them; but they rarely come to blows. They

* *Zaragoza*:—Mean temperature, 61°; extremes, 100° and 21°; difference, 8[illegible]°; rainfall, 1[illegible] inches. *Barcelona*:—Mean temperature, 63°; extremes, 88° and 32°; difference, 56°; rainfall, 1[illegible]·7 inches.

are said to be less firm of character than the Aragonese, yet they succeeded in maintaining their provincial independence much longer. Few towns have stood more sieges than Barcelona, and fewer still have offered a more valiant defence. The Catalans are undoubtedly industrious. They have not only converted the irrigable valleys facing the sea into gardens, but have likewise attacked the arid mountains, and, by triturating the rocks and carrying thither soil from the plain, have made them produce grapes, olives, and corn. Hence the proverb, "A Catalan can turn stones into bread." Agriculture, however, does not wholly supply the wants of so dense a population, and Barcelona with its suburbs has become a huge manufacturing centre, where cottons, woollens, and other textile fabrics, hardware, chemical preparations, glass, paper, and various articles are produced. The province of Barcelona is the chief seat of the cotton industry in Spain, and fully deserves to be called the Spanish Lancashire.* The Catalans are a migratory race. They are met with not only in every other province of Spain, but in all the Spanish colonies. Everywhere they are reputed for their thrift, and in Cuba are hated as rivals or masters by creoles and blacks.

The towns of Aragon and Catalonia present the same contrasts as do the inhabitants of the two provinces. Those of the former are of solemn and even gloomy aspect, whilst the picturesque cities of the maritime province are full of bustle and mirth. The former represent the Middle Age, the latter our modern era.

Zaragoza (Saragossa) is most favourably situated in the very centre of the plain of Aragon. It has its Moorish alcazar (the Aljaferia), now used as a barrack; a curious leaning tower similar to that of Pisa; and fine promenades, including the Coso and shaded walks. But prouder than of all these attractions are the inhabitants of the epithet "heroic," which was bestowed upon their city in consequence of the valiant resistance it offered in 1808 and 1809, when they not only defended their homes, but also their patron saint, the Virgen del Pilar.

At Zaragoza a few wide avenues have been cut through the labryinth of tortuous streets, but the other towns of the province have preserved their physiognomy of former days. Jaca, in the upper valley of the Aragon, between the Pyrenees and the Sierra de la Peña, with its grey houses, still retains its turreted walls and ancient citadel. It is the old capital of the kingdom of Sobrarbe, but would hardly be mentioned now if it were not for its position at the foot of the Pass of Canfranc, and the neighbouring monastery of La Peña. Huesca, at the base of the hills, the Osca of the Romans, recalls the dominion of the Ausks, or Euskarians. Standing in the midst of an irrigated plain, it still enjoys a certain importance. It boasts of a richly decorated cathedral, deserted monasteries, an old royal palace now occupied by the university, and the remains of a turreted wall. Barbastro, near the river Cinca, occupies a position similar to that of Huesca. The carriage road over the Somport connects it with France.

The Arab city of Calatayud, on the river Jalon, is commercially the second city of Aragon, and replaces Bilbilis of the Iberians, which stood on a hill near it.

* In 1873 there were 700 cotton-mills, with 104,000 hands and 1,400,000 spindles, consuming 67,200,000 lbs. of cotton.

One of its most nauseous suburbs is wholly inhabited by mendicants. Teruel, on the Guadalaviar, the chief town of the Maestrazgo, with its crenellated walls and turrets, resembles a mediæval fortress. The Arab tower of its church is one of the curiosities of "untrodden" Spain, and its aqueduct, which crosses a valley on 140 arches, is a remarkable work of the sixteenth century.

Several towns of the interior of Catalonia are equally venerable in their aspect. "Proud" Puigcerda (Puycerda), close to the French frontier, on the Upper Segre, is hardly more than a collection of hovels surrounded by a rampart. The Seo de

Fig. 109.—The Delta of the Ebro.

Urgel, in a fertile portion of the same valley, is no doubt of some importance as a fortress, but its streets are dirty, its houses mean, and its mud walls dilapidated.

Still lower down the Segre we meet with the ancient city of Lérida, whose origin dates back to prehistoric times, and which, owing to its strategical position, has at all times played a prominent part in military history. The gardens of Lérida supply much produce for exportation, but the place cannot rise into importance until the Franco-Spanish coast railway shall have been completed.

Tortosa, a picturesque city just above the delta of the Ebro, and formerly the capital of an Arab kingdom, commands one of the passages over the Ebro,

and its commerce would increase if the river offered greater facilities for navigation.

Tarragona in the time of the Romans was the great maritime outlet of the valley of the Ebro. The city was then nearly forty miles in circumference, with arenas, amphitheatres, palaces, temples, and aqueducts, and a population of hundreds of thousands. The ruins of this ancient Tarraco have been made use of in the construction of the modern city, with its clumsy cathedral, towers, decayed ramparts, and Roman aqueduct intersecting the suburban orange groves. The manufacturing town of Reus may almost be looked upon as a suburb of it, and is rapidly increasing in population. Near it is the monastery of Poblet, in which are deposited the remains of the Kings of Aragon.

Fig. 170.—The Steppes of Aragon.
According to Willkomm. Scale 1 : 2,000,000.

The country between Tarragona and Barcelona is densely populated. We pass through the fertile district of El Panadés, the equally fertile valley irrigated by the reddish waters of the Llobregat, with towns and villages in rapid succession, until we reach the suburbs of Barcelona. The city proper lies on the sea, at the foot of the fortifications crowning the steep heights of Monjuich. There is another citadel of immense size to the east of the city, yet this latter reposes gaily beneath its batteries, which could easily reduce it to ashes. Barcelona boasts of being the great pleasure town of Spain. Its population is less than that of Madrid, but there are more theatres and concert halls. The dramatic performances are of a superior class, and the taste of the people is more refined. The public promenades, such as the Rambla, occupying the bed of an ancient torrent, the

BARCELONA, SEEN FROM THE CASTLE OF MONJUI.

sea-walls, and the avenues of trees which separate Barcelona from the citadel and the suburb of Barceloneta, are crowded on fine evenings. Barcelona is no doubt the "unique city" of Cervantes, and perhaps "the home of courtesy and of valiant men;" but we doubt its being the "common centre of all sincere friendships." Barcelona exceeds all other towns of Spain by its commerce.* The harbour is exposed to southerly winds, and somewhat difficult of access. Barcelona is ever renewing itself. There are broad streets of uniformly built houses, and some quarters, as that of Barceloneta, on a tongue of land to the east of the port, are laid out with all the regularity of an American city. The only architectural monuments of note are a Gothic cathedral and the old palace of the Inquisition. But all around the town, beyond the suburbs with their factories and workmen's dwellings, we meet with numerous villas, occupying delightful nooks in verdant valleys or the steep hill-slopes. No more charming district exists in Spain than that to the north of Barcelona and Badalona, extending as far as Masnou, Mataró, and the river Tordera. Promontories covered with vines, pines, and cork-oaks, and sometimes crowned by the ruins of a castle, project into the sea; the valleys are laid out in gardens enclosed with aloe hedges; towns and villages follow in rapid succession; and the boats and nets of fishermen are seen on the beaches.

Most towns of the province of Barcelona emulate the manufacturing industry of the capital. Igualada, at the foot of the Monserrat; Sabadell, in a valley, full of factories; Tarrasa, the old Roman city, near which are the famous baths of La Puda; Manresa, on the Cardoner rivulet; Vich, the old primatial city of Catalonia; and Mataró, on the coast, are all distinguished for the manufacture of cloth, linens, silks, cotton stuffs, ribbons, lace, leather, hats, faience, glass, or paper. Manufacturing industry has likewise spread into the neighbouring province of Gerona, and notably to the city of Olot; but the vicinity of the French frontier, the practice of smuggling, and the presence of large garrisons in the fortresses of Gerona and Figueras have hindered its development. Gerona has sustained many a siege, and Figueras, in spite of its huge citadel, has been repeatedly captured. The walls of Rosas are crumbling to pieces, and every vestige of the Greek city of Emporion has been buried beneath the alluvium brought down by the river Fluvia, but it still lives in the name of the surrounding district of Ampurdan.†

The crest of the Pyrenees constitutes for the most part the political boundary between France and Spain, but there are exceptions to this rule. At the western extremity of the chain Spain enjoys the advantage, for the valley of the Bidassoa, on the French slopes, belongs to it; but France is compensated in the east by the possession of Mount Canigou and the valley of the Upper Segre. As a rule, however, Spain has the best of the bargain, and this is only natural, as the Pyrenees are most accessible from the south, and the population there is more dense. The

* Value of exports and imports in 1867, £10,[illegible].

† Population of the principal towns: [illegible]; Zaragoza, [illegible]; Calatayud, 12,000; Huesca, 10,000; Teruel, 7,000. [illegible]; Barcelona, 180,000; [illegible]; Tortosa, 22,000; Mataró, 17,000; Sabadell, 15,000; Manresa, 14,000; Tarragona, [illegible]; Lérida, 12,000; Vich, [illegible]; Badalona, 11,000; Igualada, 10,500; Olot, 10,000; Tarrasa, 9,000; Gerona, 8,000; Figueras, 8,000.

herdsmen of Aragon and the Basque provinces never missed an opportunity of taking possession of pastures on the northern slopes of the mountains, and these encroachments were subsequently ratified by international treaties.

The valley of Aran, in the very heart of the Pyrenees, is one of these bloodless conquests of Spain. The French Garonne rises in that valley, but the defile through which it leaves it is very narrow and easily obstructed. Up to the eighteenth century the Aranese enjoyed virtual independence; and as they are shut off from the rest of the world by mountains covered with snow during the greater part of the year, these 21,000 mountaineers would appear to possess more claim to constitute themselves an independent republic than any other people in Europe.

Farther east there is another mountain valley which, nominally at least, forms an independent republic. This is Andorra, a territory of 230 square miles, with 6,000 inhabitants. A few pastures on the French slope excepted, the whole of this valley is drained by the beautiful stream of Embalira, or Valira, which joins the Segre in the smiling plain of Seo de Urgel. Most of the mountains of Andorra have been robbed of their trees, and the destruction of the few remaining forests is still going on. The vegetable soil is being rapidly washed away, and the moraines of ancient glaciers gradually slide down the mountain slopes.

The republic of Andorra is said to owe its existence to a defeat of the Saracens by Charlemagne or Louis le Débonnaire, but in reality up to the French Revolution the valley enjoyed no sovereign rights whatever. It was a barony of the Counts of Urgel and of Aragon. In 1278 it was decided that Andorra should be held jointly by the Bishops of Urgel and the Counts of Foix. In 1793 the French republic declined to receive the customary tribute, and in 1810 the Spanish Cortes abolished the feudal régime. Andorra thus became an independent state. The inhabitants, however, continue to govern themselves in accordance with old feudal customs, which are not at all reconcilable with the principles of modern republics. The land belongs to a few families. There is a law of entail, and younger brothers become the servants of the head of the family, whose hospitality they enjoy only on condition of their working for him. The tithes were only abolished in 1842. The "liberty" of these mountaineers consists merely in exemption from the Spanish conscription and impunity in smuggling; and, to increase their revenues, they have recently established a gambling-table. Their legitimate business consists in cattle-breeding, and there are a few forges and a woollen factory.

The republic of Andorra recognises two suzerains, viz. the Bishop of Urgel, who receives an annual tribute of £25, and the French Government, to whom double that sum is paid. Spain and France are represented by two provosts, the commandant of Seo de Urgel exercising the functions of viceroy. The provosts command the militia and appoint the bailiffs, or judges. They, together with a judge of appeal, alternately appointed by France and Spain, and two *rahonadores*, or defenders of Andorran privileges, form the Cortes. Each parish is governed by a consul, a vice-consul, and twelve councillors elected by the heads of families. A General Council, of which the consuls and delegates of the parishes are members, meets at the village of Andorra. But in spite of these fictions Andorra is an

integral part of Spain, and the carabineers never hesitate to cross the frontiers of this sham republic. By language, manners, and customs the Andorrans are Catalans. Exemption from war has enabled them to grow comparatively rich. They are intelligent and cunning, and well know how to assume an air of astonishment when their interests are at stake. Acting the fool, in order to take some one in or avoid being ensnared, is called by their neighbours "playing the Andorran." Andorra, a neat village, is the capital of the territory, but San Julia de Loria is the most important place, and the head-quarters of the smugglers.

VII.—Basque Provinces, Navarra, and Logroño.*

The Basque provinces (Vascongadas) and the ancient kingdom of Navarra, though scarcely a thirtieth part of Spain, constitute a separate region, not only on account of geographical position, but also because they are inhabited for the most part by a distinct race, having its own language, manners, and political institutions.

Looked at from a commanding position, the hills connecting the Pyrenees with the Castilian plateau resemble a sea lashed by contrary winds, for there are no prominent mountain ranges. Even the Pyrenees have sunk down to a mean height of 3,000 feet, and the Lohihulz (3,973 feet), where they cease to form the frontier, scarcely deserves to be called a mountain. They extend thence to the Pass of Azpiroz (1,850 feet), where they terminate. The vague range beyond is known as Sierra de Aralar (4,330 feet), and still farther west by a variety of local names. These mountains are traversed by several low passes, facilitating communication with the valley of the Ebro, the most important of which is the Pass of Orduna (2,134 feet), which is crossed by the railway from Bilbao to Miranda, and dominated by the Peña Gorbea (5,042 feet) and the Sierra Salvada (4,120 feet).

The spurs which descend from these mountains towards the Bay of Biscay are likewise very irregular in their features. Most of them are connected by transversal chains, through which the rivers have only with difficulty forced for themselves an outlet towards the sea. The Bidassoa, for instance, sweeps far to the south, through the valley of Baztan, before it takes its course to the northward, in the direction of its estuary at Fuenterrabia. Within its huge bend it encloses a detached portion of the Pyrenees, the principal summit of which is the famous Mont La Rhune (2,954 feet), on the French frontier. Equally isolated is the Jaizquibel (1,912 feet), which rises from the plains of Irun, close to the mouth of the Bidassoa, and from whose summit there is a view of incomparable beauty. It terminates in Cape Higuer, or Figuer, the northernmost point of Cantabria.

The maritime slope of the Basque countries presents a great variety of geological formations, including Jurassic limestones and chalk, granites and porphyries. The mineral resources are immense; copper and lead abound, but the great wealth consists in iron. The mines of Mondragon, in Guipúzcoa, have long been famous, but the most productive mining district is Somorrostro, to the west of Bilbao.

* Navarra and Basque provinces, 4,828 square miles, 706,676 inhabitants; Logroño, 1,945 square miles, 182,941 inhabitants.

The sierras of Aragon running parallel with the Pyrenees extend also into Navarra and the Vascongadas, and are frequently connected with the main range by lateral branches. To the west of Pamplona they spread out into a rugged plateau, surmounted by the Sierra de Andía (4,769 feet), the labyrinthine ramifications of

Fig. 171.—The Environs of Barcelona.

Scale 1 : 100,000.

which occupy the district of Amezcuas, a region offering great advantages to partisan warfare. The southern chain, not so well defined, bounds the Carrascal, or "country of evergreen oaks," in the south. This region, too, has frequently been the scene of civil war. Farther west the famous defile of Pancorbo leads through the Montes

GORGES OF PANCORBO.

Obarenes (4,150 feet) to the plateau of Castile. The saddle of Alsásua (1,955 feet), over which passes the railway from Vitoria (1,684 feet) to Pamplona (1,378 feet), connects the Pyrenees with the Sierra de Andia, whilst as to the mountains of the province of Logroño, they are spurs of the mountain masses forming the northern edge of that plateau, viz. the Sierra de la Demanda in the west, and the Sierra de Cebollera in the east, the latter giving birth to the Sierras de Camero.

Several of the mountain districts are quite Castilian in their asperity and nakedness, for the forests have been cut down to feed the iron furnaces. In Southern Navarra we meet with veritable deserts. But in the Basque countries and Western Navarra, where it rains copiously, the hills are clad with forests, the valleys with turf, and rivulets wind amongst groves of elder-trees. Naked precipices of sand or

Fig. 172. The Sand-banks of Mataro.

Scale 1 : 125,000.

limestone contrast well with this verdure, from which peep out the small white houses of villages embosomed in orchards, and scattered in the valleys and hill-sides.

Moist north-westerly winds are frequent in the Bay of Biscay, and account for the equable temperature of the country. It rains abundantly, and in all seasons. The climate resembles that of Ireland, and, though damp, it is healthy and most conducive to the growth of vegetation. The country is rich in corn, wine, oil, and cattle; the northern slopes are covered with fruit trees of every kind, and *zagardua*, or cider, is a favourite drink; and in the more remote valleys of the Pyrenees we meet with some of the most magnificent forests in Spain. That of Val Cárlos (valley of Charlemagne), near the famous Pass of Roncevaux, or Roncesvalles, though none of the largest, is reputed for its beauty and legendary associations.

Who are the Basques, whose bravery is traditional? What is their origin? What their relationship to the other peoples of Europe? All these questions it is impossible to answer. The Basques are a mysterious race, and can claim kinship with no other nation. It is not even certain whether all those who pass by that name are of the same race. There is no typical Basque. No doubt most of the inhabitants of the country are distinguished by finely chiselled features, bright and firm eyes, and well-poised bodies, but the differences in stature, form of skull, and features are very considerable. Between Basque and Basque the differences are as great as between Spaniards, Frenchmen, and Italians. There are tall men and short, brown and fair, long skulls and broad, and almost every district has its distinct type. The solution of this problem is daily becoming more difficult, for, owing to a continual intermixture with their neighbours, the original type, if there really existed one, is gradually being obliterated. It is possible that at some remote time the remnants of various races occupied this country, and adopted the language of the most civilised among them. Instances of this kind abound in every people.

Leaving out of sight the differences existing between the Basques of Spain and those of French Navarra, the Basques may be described as having broad foreheads, straight noses, finely shaped mouths and chins, and well-proportioned figures. Their features are exceedingly mobile, and every sentiment is reflected upon them by a lighting up of the eyes, a movement of the eyebrows, or a trembling of the lips. The women especially are distinguished by the purity of their features; their large eyes, smiling lips, and small waists are universally admired. Even in the towns, where the race is least pure, most of them are strikingly beautiful and full of grace. There are districts where obesity is a veritable phenomenon. Men and women carry themselves nobly; they are polite to strangers, but always dignified.

The Basques call themselves Euskaldunac, or Euskarians, and their language Euskara, or Eskuara. The exact meaning of these terms is not known, but in all probability it is "speech." This speech of the Basques differs in its words and structure from every other language of the world; but many words have been borrowed from neighbouring languages. Everything with which they became acquainted through foreigners, all ideas imported since prehistoric times, are designated by words not forming part of the original stock of the language. Even the names of domestic animals and metals are of foreign origin. The language may, perhaps, be classed with the polysynthetic languages of the American Indians, or with the agglutinant idioms of the Altai, and belongs, consequently, to the most remote period of human history. As to the Basques themselves, they declare their speech to be superior to every other, and according to some it was in Euskara that man first saluted the sun.

For the present we are compelled to look upon the Basques as the last remnant of an ancient race. There are not wanting proofs that the Euskaldunac formerly occupied a far wider territory. No monuments, no inscriptions, nor even legends give a clue to this; but we find it, after thousands of years, in the names of mountains, rivers, and towns. Euskarian names abound in the Pyrenean valleys of Aran, Bastan, Andorra, and Querol, and in the plain to the north of them.

Most writers on Spain identify these Euskarians with the Iberians of the ancients, and they have been credited with being the authors of various inscriptions upon coins written in unknown characters which have been discovered in Spain

Fig. 173.—The Valley of Andorra.
Scale 1 : [illegible]

and Southern France, and which M. Boudard has shown to be really in Euskarian. They must thus have occupied the whole of the peninsula and Southern France, and even in Africa traces of their presence have been discovered.

The extent of territory occupied by Basque-speaking populations in the time of the Romans is not known, but probably it was not any greater than it is now, for the Euskarians have ever since maintained their independence, and nothing compelled them to adopt the language of their despised neighbours. Bilbao has almost become Spanish, as have also the towns in the plain of Alava. Pampeluna, the Irun of the Iberians, is Euskarian merely by historical tradition, whilst farther east Basque is only spoken in the upper valleys of Roncevaux, Orbaiceta, Ochagavia, and Roncal. The Peak of Anie marks the extreme limit of Basque on both slopes of the Pyrences. Out of four Euskarian provinces there is only one—viz. Guipúzcoa—where Basque predominates; but even in that province the inhabitants of the cities of St. Sebastian and Irun speak Castilian. In the south of Navarra and of the so-called Basque provinces the inhabitants have spoken a Latin dialect from time immemorial. Spanish and French are slowly but surely superseding the Basque, and the time when it will be a thing of the past is not very distant.*

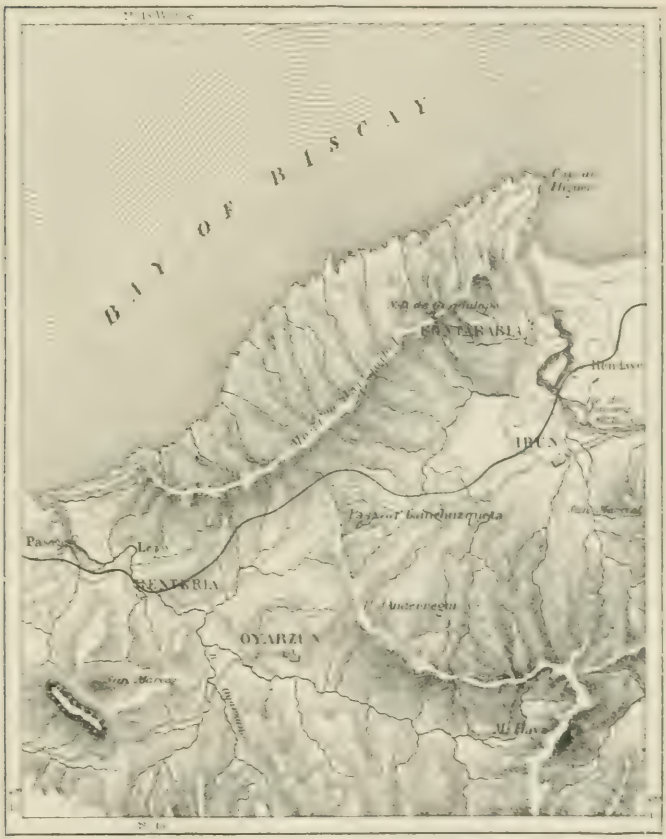
Strabo speaks of the Cantabrians, the direct ancestors of the Basques, with an admiration akin to horror. Their bravery, love of freedom, and contempt of life he looked upon as superhuman qualities. In their wars against the Romans they killed each other to escape captivity, mothers strangled their children to spare them the indignities of slavery, and prisoners nailed to the cross burst into a chant of victory. The Basques have never been wanting in courage. History shows that they were superior to the surrounding nations in uprightness, generosity, love of independence, and respect for personal liberty. The serfs of the neighbouring provinces looked upon them as nobles, for in their abject condition they fancied that personal liberty was a privilege of nobility. This equality, however, existed only in Guipúzcoa and Biscay, whilst in Alava and Navarra, where the Moors gained a footing, and Castilian influences made themselves felt later on, there originated a feudal nobility, with its usual train of vassals and serfs. However, all the provinces have jealously watched over their local privileges. At a period when European history was one continual series of wars, the Basques lived in peace. Their small commonwealths were united into a fraternal confederation, and enabled to resist invaders. They were bound to sacrifice life and property in the defence of their common fatherland, and their standards were emblazoned with three hands joined, and the motto, *Irurak bat, i.e.* "The three (provinces) are but one."

Nothing exhibits more strikingly the comparative civilisation of these Euskarians than their respect for personal liberty. The house of a Basque was inviolable, and he could not be deprived of his horse or his arms. At their national meetings all voted, and in some of the valleys even the women were permitted to take part in the discussions. It was not, however, customary for the women to sit down at the same table with the *etcheco-jauna*, or master of the house, and his sons; they took their meals separately by the side of the hearth. This old custom is still observed in country districts; and so strong is the force of tradition, that the wife would almost consider it a disgrace to be seen sitting by

* In 1875 Basque was spoken by 556,000 individuals, viz. by 116,000 in France, by 340,000 in the three Basque provinces of Spain, and by 100,000 in Navarra.

the side of her husband on any other occasion than her wedding-day. On fête-days the women keep apart; they dance amongst themselves, allowing the men to engage in ruder sports. If a nation may be judged from its pastimes, the Basques deserve to rank high in our estimation. They are fond of athletic sports, and mysteries and pastoral pieces are still performed in the open air.

Fig. 171.—*Provinces.*



But the Basques have their faults. Anxious to retain their ancient privileges, or *fueros*, they have become the champions of despotism. These fueros date from 1332, when deputies from the provinces went to Burgos, and offered the title of Lord to Alfonso the Judge, King of Castile. In accordance with the treaty then

concluded, the sovereign is prohibited from possessing any fortress, village, or even house within the territory of the Euskarians. The Basques are exempt from the conscription, and their militiamen, or *miqueletes*, remain within the provinces except in time of war. The taxes can only be levied with the consent of the provincial juntas, and must be expended within the provinces, except what may be granted as a "gift." Commerce is not subjected to the same restrictions as in the rest of Spain, and there are no monopolies. The municipalities enjoy absolute self-government, carried on by an alcalde, an *ayuntamiento*, or town council, and *parientes mayores*, or elders. In appearance this organization is quite democratic, but in reality there exist many feudal usages. In some places the town councils are self-elected; in others they are elected by persons paying a specified amount in taxes, or by nobles of a certain category; in others, again, they are appointed by the lord of the manor. The provincial juntas are elected in most diverse ways. The franchise, far from being universal, is a privilege, and its exercise is attended with puerile formalities. The laws of precedence are rigidly adhered to.

It is quite clear that the exceptional position of the Basque provinces cannot be maintained. Navarra was assimilated with the rest of Spain in 1839, and this process is progressing irresistibly in the other provinces. If the descendants of the Euskarians decline to share free institutions with the rest of Spain, they can never maintain them on their own behalf. Twice already have they been defeated on an appeal to arms; but more powerful than war is the influence exercised by industry, commerce, and increased facilities for intercommunication. This fusion is being hastened by emigration and migration, for the Basques not only seek work during winter in the more hospitable lowland districts, but they also emigrate in thousands. They are very clannish, and at Madrid and elsewhere have founded "Patriotic Societies," but in spite of these they soon become merged with the rest of the population. The few towns are principally inhabited by strangers, for the Basques prefer a country life. Their homesteads are scattered over hill-slopes and through the valleys, and beneath the oaks in front of them the inmates meet after the day's labour to pass their time in music and dancing.

Bilbao, the largest town of the Basque provinces, has at all times proved a rival of Valencia, Santander, and Cádiz. Its exports consist principally of iron ores from neighbouring mines. Most of its inhabitants are Spaniards, and during the Carlist wars the environs of the town were frequently stained with blood. It was under its walls that Zumalacarreguy, the Carlist leader, received his deadly wound. The river Nervion connects Bilbao with its harbour at Portugalete.

St. Sebastian, the largest city of Guipúzcoa, is likewise Spanish. A seaport and fortress defended by a Castilian garrison, it resembles in aspect and language the towns of the interior of the peninsula. Monte Orgullo (475 feet), crowned by the Castle de la Mota, and bristling with fortifications; the beautiful Bay of La Concha, to the west of the town, with its fine beach; the river Urumea, which flows to the east of the citadel, and struggles at its mouth with the foam of the sea; shady walks and an amphitheatre of verdant hills dotted with villages, render St. Sebastian a delightful spot, the favourite resort of worn-out and idle cosmo-

LOS PASAGES.

politans. The town itself is devoid of interest, for since its destruction by the English in 1813 it has been rebuilt with monotonous regularity. Its harbour, though frequented by coasting vessels, is shallow and insecure. The magnificent Bay of Pasages, to the east of the town, might have been converted into a splendid harbour, but its great advantages have never been appreciated, and its mouth is now closed by a bar of alluvium brought down by the Oyarzun.

Delightful Fuenterrabia (Fontarabie), with its escutcheoned houses, is likewise shut off from the sea by a bar, and is indebted for such importance as it possesses to its sea baths and the vicinity of France, which is visible from its battered walls. Irun, the terminal station of the Spanish railways, close to the French frontier, is an important strategical position; and Tolosa, with its factories, is the capital of Guipúzcoa. Zarauz, Guetaria (on the neck of a peninsula), and Lequeitio are seaside resorts. Zumaya, at the mouth of the Urola valley, has quarries of

Fig. 175.—Azcoitia and Azpeitia.
Scale 1 : 50 000.

1 Mile.

gypsum, which furnish excellent cement. Near Vergara are ferruginous springs, and a famous college founded in 1776 by the Basque Society. The convention which put a stop to the first Carlist war in 1839 was signed here. Durango, likewise, has frequently been mentioned in connection with the civil wars carried on in the north of Spain. Guernica, in Biscay, boasts of a palace of justice and an old oak beneath which the legislature is in the habit of meeting; but, like all other Basque towns, it is hardly more than a village.

The centres of population are not more numerous on the southern slope of the Pyrenees. Vitoria, the capital of Alava, on the railway connecting Madrid with Paris, is a commercial and manufacturing town. Pamplona, or Pampeluna, recalls the name of Pompey, who rebuilt it. It is a fortress, often besieged and captured. Its cathedral is one of the finest in Spain. Tafalla, *la flor de Navarra*, the ancient capital of the kingdom, has the ruins of a palace, which Carlos the Noble, who

built it, desired to unite by means of a covered gallery with the palace of Olite, three miles lower down in the same valley. Puente la Reina is celebrated for its wines. Estella, one of the most charming towns of Navarra, commands several roads leading to Castile and Aragon, and its strategical importance is consequently considerable. The Carlists, during the late war, transformed it into a formidable fortress.

Tudela, abounding in wines, Calahorra, and Logroño, all in the adjoining province of Logroño, are likewise of some value from a military point of view, for they command the passages over the Ebro. Calahorra, with its proud motto, "I have prevailed over Carthage and Rome," was the great bulwark of defence when Sertorius fought Pompey, but was made to pay dearly for its heroism. Besieged by the Romans, its defenders, constrained by hunger, fed upon their women and children, and most of them perished. Though situated in the fertile district of Rioja, beyond the frontiers of the Euskarian language, the history of Calahorra is intimately connected with that of the Basque provinces, for upon its ancient laws were modelled the fueros of Alava.*

VIII.—Santander, the Asturias, and Galicia.

The Atlantic slope of the Cantabrian Pyrenees is a region completely distinct from the rest of Spain. Mountains, hills, valleys, and running waters succeed each other in infinite variety, and the coast throughout is steep, with bold promontories and deep inlets, into which flow rapid torrents. The climate is moist and salubrious. The Celto-Iberian inhabitants of the country have in most instances escaped the commotions which devastated the other provinces of the peninsula, and the population, in proportion to the cultivable area, is more dense than elsewhere. This region, being very narrow compared with its length, has been split up into several political divisions, in spite of similarity of physical features. The old kingdom of Galicia occupies the west, the Asturias the centre, and Santander the east.†

The mountain region of Santander begins immediately to the east of the Sierra Salvada and the depression known as Valle de Mena. The Cantabrian Mountains slope down steeply there towards the Bay of Biscay, whilst their height above the upland, through which the Ebro has excavated its bed, is but trifling. The Puerto del Escudo attains an elevation of 3,241 feet above Santander, its southern descent to the valley of the Virga hardly exceeding 500 feet. The Pass of Reinosa (2,778 feet), farther west, through which runs the railway from Madrid to Santander, is even more characteristic. An almost imperceptible height of land there separates the plateau from the steep declivity which leads down to the coast, and by means of a canal sixty feet deep, and a mile in length, the waters of the Ebro might be diverted into the river Besaya, which enters the Atlantic at San Martin de Suances. This height of land forms the natural outlet of

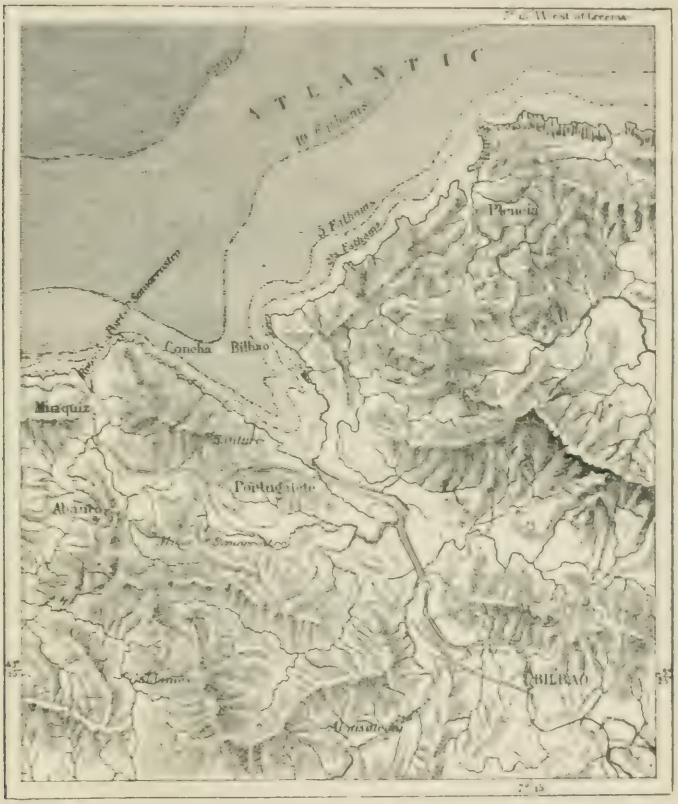
* Population of principal towns (approximately):—*Biscay* (Vizcaya): Bilbao, 30,000. *Guipúzcoa:* St. Sebastian, 15,000; Tolosa, 8,000. *Alava:* Vitoria, 12,500. *Navarra:* Pamplona, 22,000; Estella, 6,000. *Logroño:* Logroño, 12,000; Calahorra, 7,000.

† | | | | |
|---|---|---|---|
| Santander . . . . | 2,113 sq. m. | 241,581 inhabitants | 114 to a sq. m. |
| Asturias . . . . | 4,091 „ | 610,883 „ | 152 „ |
| Galicia . . . . | 11,344 „ | 1,989,281 „ | 176 „ |

the Castiles to the sea, and its possession is as important to the inhabitants of the plateau as is that of the mouth of a river to a people dwelling on its upper course.

Immediately to the east of this pass the aspect of the mountains changes. They rise to a great height, piercing the zone of perennial snow, and their southern escarpments are of great steepness. The Peña Labra (8,295 feet) dominates the

Fig. 176.—The Environs of Bilbao.



first of these mountain masses. Rivers descend from it in all directions: the Ebro in the east, the Pisuerga in the south, and the Nansa, or Tinamenor, in the north-west. Farther west the Peña Prieta rises to a height of 8,295 feet, its snows feeding the Carrion and Esla. It is joined in the north to a mountain mass even more considerable, which bears the curious name of Peñas de Europa, or "rocks

of Europe," and culminates in the Torre de Cerredo (8,784 feet), covered with snow throughout the year, and boasting even of a few glaciers, due to the excessive amount of precipitation.

The valley of La Liébana, at the eastern foot of the Peñas de Europa, resembles a vast caldron of extraordinary depth. Shut in on the west, south, and east by huge precipices rising to a height of 6,500 feet, it is closed in on the north by a transversal chain, through which the waters of the Liébana have excavated for themselves a narrow passage. The village of Potes, in the centre of this valley, lies at an elevation of only 981 feet above the level of the sea. In Santander and the Asturias, even more frequently than in the Basque country, we meet with secondary chains running parallel with the coast. These are composed of triassic,

Fig. 177.—St. Sebastian.
Scale 1 : 30,000.

Jurassic, and cretaceous rocks, and rise like advanced walls of defence in front of the main range of the mountains, which consist of Silurian slates upheaved by granite. It results from this that the course of the rivers is most erratic. On leaving their upper valleys, where they frequently form cascades, their farther progress is arrested by these parallel ranges, and they twist about to the east and west until they find an outlet through which they may escape.

The two funnel-shaped valleys of Valdeon (1,529 feet) and Sajambre are enclosed between spurs of the Peñas de Europa. Their torrents drain into the Bay of Biscay, but they are most readily accessible from the plateau. Farther west the mountains decrease in height, and their main crest gradually recedes from the coast. They are crossed here by the Pass of Pajares (4,471 feet), which connects Leon with Oviedo.

The Asturian Mountains are objects of veneration to every patriotic Spaniard. Beautiful as they are, their lower slopes being covered with chestnut-trees, walnut-trees, and oaks, whilst higher up forests of beeches and hazel alternate with meadows, their beauty is enhanced by the fact of their having afforded a refuge to the Christians whilst the Moors held the rest of the country. Mount Auseva sheltered St. Pelagius and his flock, and at Covadonga he built himself an abbey. These "illustrious mountains" do not, however, merely boast of historical associa-

No. 178.—St. Sebastian

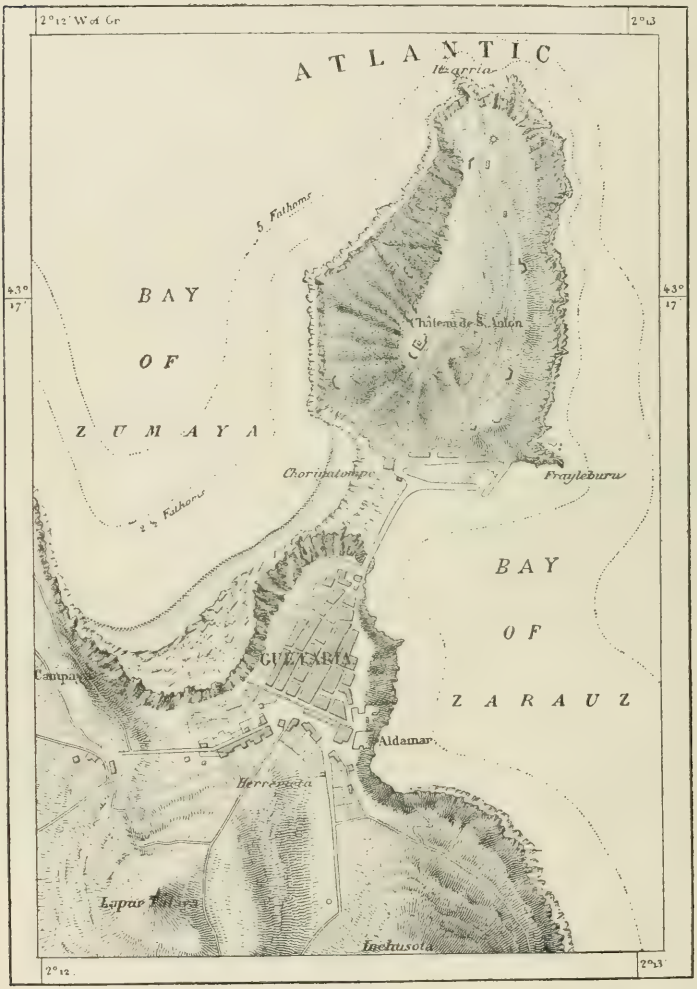
tions, delightful villages, herds, and pastures: they hide within their bowels a rich store of coal, one of the principal sources of wealth to the Asturias.

Galicia is separated from the Castilian plateau by a continuation of the Cantabrian Pyrenees, which here swerve to the south, and through which the Sil has excavated its bed. To the north of that river they culminate in the Pico de Miravalles (6,362 feet), and are crossed by the Pass of Predrafita (3,600 feet), through which runs the main road from Leon to Galicia.

In Galicia the hills rarely form well-defined chains, and mostly consist of

primitive rocks or small table-lands, with peaks or summits rising a few hundred feet above the general level of the country. The disposition of the small ranges

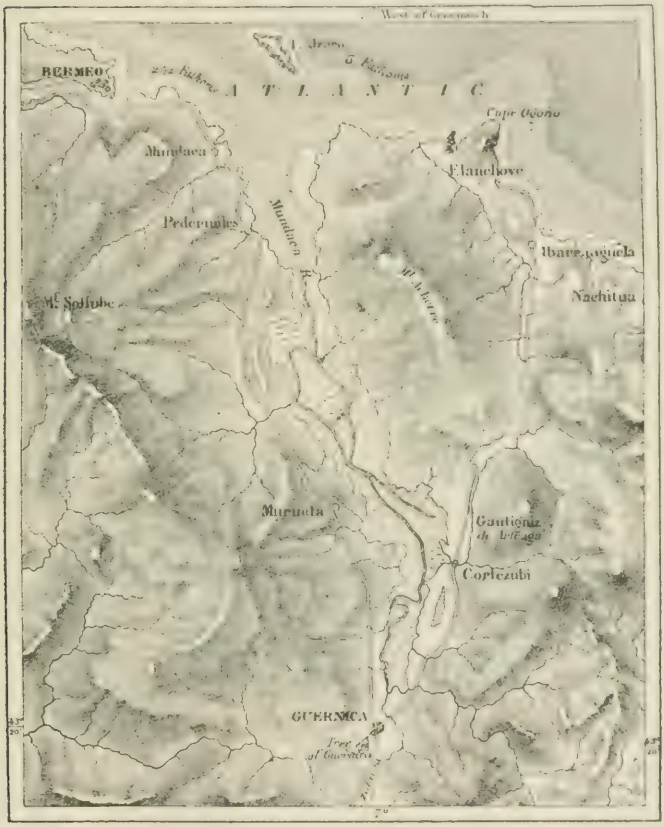
Fig. 179.—Guetaria.
Scale 1 : 8,000.



generally corresponds with that of the coast. The Sierra de Rañadoiro (3,612 feet), a spur of the Cantabrian Mountains, forms the natural boundary between the

Asturias and Galicia. West of it, the Sierra de Meira (2,982 feet) runs in the same direction, but the chains which terminate in Capes Estaca de Vares and Ortegal (*i.e.* Nortegal, "north cape") run from east to west, and are dominated by the pyramid of Monte Cuadramon (3,342 feet). The hills to the west of the river Miño

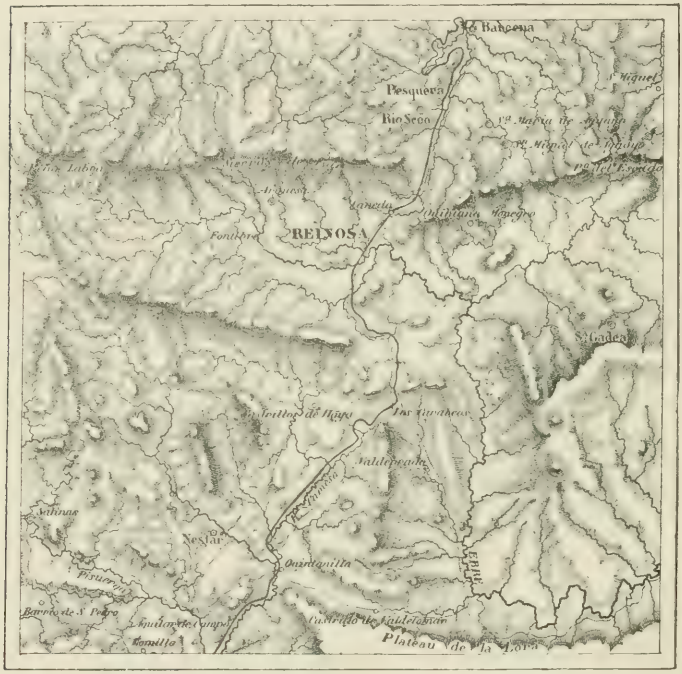
Fig. 180.—GUERNICA.
Scale 1 : 60000.



(Minho) terminate in the famous promontories of Toriñana and Finisterre, or "land's-end." This latter, a steep cliff rising boldly above the waters to the west of the wide Bay of Corcubion, formerly bore a temple of the ancient gods, since replaced by a church dedicated to the Virgin.

The coast of the Asturias abounds in small bays, or *rias*, bounded by steep cliffs. In Galicia these rias assume vast proportions, and are of great depth. They may fitly be likened to the fiords of Northern Europe, and their origin appears to be the same. The marine fauna of these Galician rias is Britannic rather than Lusitanian, for amongst two hundred species of testacea collected by Mr. MacAndrew there are only twenty-five which were not also found on the coasts of Britain. Moreover, the flora of the Asturian Mountains is very much like that of Ireland:

Fig. 181.—Pass of Reinosa.
Scale 1 : 300,000.



and these facts go far in support of the hypothesis, started by Forbes, that the Azores, Ireland, and Galicia, anterior to the glacial epoch, were connected by land.

The climate, too, resembles that of Great Britain. The rainfall on the exterior slopes of the mountains is abundant, whilst to the south of them, in the arid plains of Leon and Castile, it hardly rains at all. There are localities in the Asturias where the rainfall amounts to more than six feet annually, a quantity only again met with on the western mountain slopes of Scotland and Norway, and on the southern declivities of the Swiss Alps. There is no season without rain, and

droughts are exceedingly rare. Equinoctial storms are frequent in autumn, and render the Bay of Biscay dangerous to mariners. The temperature is equable, and fogs, locally known as *bretimas*, are as frequent as in the British Islands. These fogs exercise a strong influence upon the superstitious minds of the Galicians, who fancy they see magicians, or *nuveiros*, ride upon the clouds, expand into mists, and shrink back into cloudlets. They also believe that the bodies of the dead are conveyed by the mists from cemetery to cemetery, these fearful nocturnal processions being known to them as *estadeas*, or *estadhumas*.*

In spite of an abundance of running water, the Cantabrian provinces cannot boast of a single navigable river. In the Asturias the littoral zone is too narrow, and the slope too considerable, to admit of torrents becoming tranquil rivers. Nor are the Tambre and Ulla, in Galicia, of any importance; and the only true river of the country is the Miño, called Minho by the Portuguese on its lower course, where it forms the boundary between the two states of Iberia. The Miño is fed from both slopes of the Cantabrian Mountains, the Miño proper rising on the western slope, whilst the Sil comes from the interior of the country. The latter is the main branch. "The Miño has the reputation," say the Spaniards, "but the Sil has the water." The Sil, before leaving the province of Leon, passes through the ancient lake basin of the Vierzo, now shrunk to a small sheet of water known as the Lago de Carrocedo. It then passes in succession through a wild gorge, a second lake basin, the tunnel of Monte Furado ("pierced mountains"), excavated by the Romans to facilitate their mining operations, and finally rushes through a gorge intersecting the Cantabrian Mountains, and one of the wildest in all Spain, with precipitous walls more than 1,000 feet in height. Immediately below the confluence with the Miño a second gorge has to be passed, but then the waters of the river expand, and flow into the sea through a wide estuary. Below Tuy, for a distance of about twenty miles, the river is navigable. But though of small service to navigation, the Miño is nevertheless one of the eight great rivers of the Iberian peninsula, and proportionately to the extent of its basin it is the most copious.†

The water of this and other rivers is not needed for agricultural purposes, for it rains abundantly in Galicia and the Asturias, and the emerald meadows of these provinces are as famous as those of England. The flora, however, is upon the

* Climate in 1858: *Oviedo:* 750 feet above the sea-level, mean temperature, 49·46° F.; extremes, 23·9° and 82°; rainfall, 81·3 inches. *Santiago:* 720 feet above sea-level, mean temperature, 59·07°; extremes, 28° and 95°; rainfall, 42·7 inches.

	Area of Catchment Basin. Sq. m.	Length of Main Branch. Miles.	Average Rainfall. Inches.	Average Discharge. Cub. ft. per sec.	Surface Drainage in Proportion to Rainfall. Per cent.
† Miño (and Sil)	9,650	190	47	17,700	50
Duero	38,610	507	20	22,950	40
Tajo (Tagus)	28,960	556	16	11,600	33
Guadiana and Zancara	23,170	553	14	5,080	25
Guadalquivir	21,240	518	19	9,220	30
Segura	8,500	217	12	710	10
Júcar	5,800	318	13	880	15
Ebro	25,100	466	18	7,100	20
Total	161,030		16	75,810	33

whole more southerly in its features than that of the countries to the north of the Bay of Biscay. The orchards produce not only apples, chestnuts, and walnuts, but also oranges, and in a garden at Oviedo dates ripen in the open air. The great moisture, however, prevents certain plants from attaining the commercial importance they would otherwise possess. The mulberry flourishes, but the culture of silk-worms has only yielded indifferent results, and even the grapes, except in a few favoured localities, yield but sour wine of disagreeable flavour. Cider, on the other hand, enjoys a high reputation, and is even exported to America.

Fig. 182.—The Peñas de Europa.
Scale 1 : 600,000.

10 Miles.

The Asturian boasts of having never submitted to the yoke of Mussulmans. Some of the mountain districts preserved their independence throughout, and nowhere could the Arabs maintain themselves for any length of time. Oviedo was called the "city of bishops," from the great number of prelates who found a refuge there. The Galicians were equally successful in their resistance to the Moors, and the blood of the Celtic inhabitants of these remote provinces is thus purer than anywhere else in Spain.

In some districts the customs are said to have remained unchanged since

the time of the Romans. The herdsmen, or *vaqueros*, of Leitariegos, on the Upper Narcea, form almost a distinct tribe. They keep apart from the rest of the Asturians, and always marry amongst themselves. Old dialects maintain their ground. The peasants on the coast of Cantabria talk their *bable*, and in Galicia the dialects differ even from village to village. The *gallego*, especially as spoken near the Miño, is Portuguese rather than Spanish, but a Lusitanian is nevertheless unable to understand a Galician, owing to the curious sing-song intonation of the latter.

The country supports a dense population, but there are few towns. Many of these consist merely of a church, a town-hall, and an inn. The homesteads are scattered over the whole country. This may be due to an innate love of nature, or perhaps, as in the Basque provinces, to the security which the country has enjoyed during centuries. Foreign and civil wars have scarcely ever affected these outlying provinces of Spain. The manners are gentle, and the bloodthirsty bull-fights of the Castilians unknown. The isolation and peace in which the Cantabrians were permitted to exist did not, however, prove of advantage in all respects. Elsewhere in Europe, nobles, priests, citizens, and the peasantry, when threatened by danger, felt constrained to make concessions to each other. Not so in the Asturias, where the peasants were reduced to the condition of serfs, and sold with the land. At the commencement of this century nearly the whole of the land in the two Asturias was in the hands of twenty-four proprietors, and in the neighbouring Galicia the conditions were not much more favourable. Matters have changed since then. The lords have grown poor, the monasteries have been suppressed, and the industrious Asturians and Galicians have invested their hard-earned savings in land. Formerly the feudal lords leased the land to the cultivators, who rendered homage and paid a quit-rent, the lease remaining in force during the reign of two or three kings, for a hundred years, or even for three hundred and twenty-nine years, according to the custom of different districts. These leases, however, frequently led to disputes; the leaseholders, on the expiration of their leases, often refused to surrender possession, and in numerous instances the law courts sustained them in this refusal.

The Galicians on the coast divide their time between the cultivation of the land and fishing. During the season no less than 20,000 men, with 3,000 or 4,000 boats, spread their nets in the Bays of La Coruña, Arosa, Pontevedra, and Vigo, where tunny-fish and sardines abound. The local consumption of sardines is enormous, and La Coruña alone exports about 17,000 tons annually to America. These pursuits, however, are not capable of supporting an increasing population, and thousands of Galicians emigrate annually. Thrifty and clannish, they usually succeed in amassing a small competency, and those among them who return exercise a civilising influence upon their less-cultivated countrymen. Ignorance and poverty, with all their attendant evils, are great in Galicia, and leprosy and elephantiasis are common diseases.

One great hindrance to the development of the resources of the country consists in the paucity of roads and railways. A beginning has been made, but, looking to the financial condition of Spain, progress will hardly be rapid.

Most of the towns of the Asturias are close to the coast. Castro-Urdiales, Laredo, and Santoña, immediately to the west of the Basque provinces, have frequently served as naval stations. The roadstead of Santoña is one of the most commodious and best sheltered of the peninsula, and when Napoleon gave Spain to his brother Joseph he retained possession of that place, and began fortifications which would have converted it into a French Gibraltar.

The great commercial port of the country is Santander, with its excellent harbour, quays, docks, and warehouses, built upon land won from the sea. Santander is the natural outlet of the Castiles, and exports the flour of Valladolid and

Fig. 183.—Rias of La Coruna and Ferrol.
Scale 1 : 210,000.

Palencia, as well as the woollen stuffs known as *sorianas* and *leonesas* from the places where they are manufactured. It supplies the interior with the colonial produce of Cuba and Puerto Rico, and its merchants keep up regular intercourse with France, England, Hamburg, and Scandinavia.* The ship-building yards at the head of the bay have lost their former importance, and the manufacture of cigars is now the great industry of the country. Sardinero, a bathing-place to the north of the town, and the hot springs of Alceda, Ontaneda, Las Caldas de Besaya, in the hills to the south, are favourite places of resort.

Along the coast to the west of Santander, as far as Gijon, we only meet with

* Imports (1873), £2,348,720; exports, £2,341,360.

villages, such as San Martin de la Arena (the port of the decayed town of Santillana), San Vicente de la Barquera, Llanes, Rivadesella, and Lastres. Nor is Gijon, with its huge tobacco factory, a place of importance, though formerly it was the capital of all Asturias. It exports, however, the coal brought by rail from Sama (Langres), and with Aviles, on the other side of the elevated Cabo de Peñas, enjoys the advantage of being the port of Oviedo, situated in a tributary valley of the Nalon, fifteen miles in the interior. Oviedo has flourishing iron-works, a university, and a fine Gothic cathedral, said to be richer in relics than any other church in the world. The mountain of Naranco shelters the town against northerly winds, and its climate is delicious. The environs abound in delightful spots. At Cangas de Onis, which was the first capital of the kingdom, founded by St. Pelagius, but now merely a village in a charming valley, are the caverns of Covadonga, in which the ashes of the saint have found a last resting-place, and which are consequently objects of the highest veneration to patriotic Spaniards. Trubia, the Government gun and small-arms factory, lies seven miles to the west of Oviedo.

Cudillero, Luarca, Navia (a place said to have been founded by Ham, the son of Noah), Castropol, and Galician Rivadeo are mere fishing villages, and only when we reach the magnificent rias opening out into the Atlantic do we again meet with real towns. The first of these is Ferrol, which was only a village up to the middle of last century, but has since been converted into a great naval station and fortress, bristling with guns, and containing dockyards and arsenals.

La Coruña, the Groyne of English sailors, depends rather upon commerce, manufactures, and fishing than upon its military establishments and fortifications. It is one of the most picturesque towns of Spain, and its favourable geographical position will enable it, on the completion of the railway now building, considerably to extend its commerce, which at present is almost confined to England.* On a small island near it stands the Tower of Hercules, the foundations of which date back to the Romans, if not Phœnicians. It was from the ria of Coruña that the "Invincible Armada" set out upon its disastrous expedition.

Each of the rias of Southern Galicia has its port or ports. That of Corcubion is sheltered by the Cape of Finisterre; on the ria of Noya are the small towns of Noya and Muros; that of Arosa is frequented by vessels which convey emigrants from the ports of Padron and Carril to La Plata; the ria of Pontevedra extends to the town after which it is named; and farther south still, the towns of Vigo and Bayona rise on the shore of a magnificent bay, protected by a group of islands known to the ancients as "Isles of the Gods." Vigo, with its excellent harbour, has become the great commercial port of the country,† but is, perhaps, better known on account of the galleons sunk by Dutch and English privateers.

Three of the principal inland towns of Galicia—viz. Lugo, Orense, and Tuy—rise on the banks of the Miño. The old Roman city of Lugo (Lucus Augusti) is enclosed within mediæval walls, and has warm sulphur springs. Orense, with its superb old bridge, is likewise celebrated for its hot springs, or *burgos*, which are

* Imports 1875 . £310,227 . Exports, £210,762.
† Imports 1875 . £876,289 . Exports, £814,369.

said to raise sensibly the temperature of the plain in winter, and supply the whole town with water for domestic purposes. Tuy, opposite the Portuguese town of Valença do Minho, is important only as a frontier fortress. Santiago de Compostela, the famous old capital of Galicia, on a hill near the winding banks of the Saria, is the most populous town of North-western Spain. It was here the grave of St. James the apostle was discovered in the ninth century. The attraction which it formerly exercised upon pilgrims was immense.*

IX.—The Present and Future of Spain.

Contemporaneous Spain is full of disorder. The political, financial, and social machinery is out of joint, and civil war, active or latent, is carried on almost in every province. The ruin wrought by these incessant domestic wars is incalculable.

Fig. 184.—Santoña and Santander.
Scale 1 : 360,000.

Successive Governments have had recourse to miserable expedients without being able to disguise the bankrupt condition of the country. The creditors of the State, no less than the Government officials, remained unpaid, and even schools had to be closed because the pittance due to the schoolmaster was not forthcoming.

But in spite of this apparent ruin real progress has been made. In order to fairly judge Spain we must remember that the period when the Inquisition was permitted to commit its judicial murders is not very remote. In 1780 a woman of Seville was burnt at the stake for "sorcery and witchcraft." At that time the greater part of Spain was held in mortmain, and the cultivation of the remainder

* Population of towns:—Santander, 21,000; Oviedo, 9,000; Gijon, 6,000; Santiago de Compostela, 20,000; La Coruña, 20,000; Ferrol, 17,000; Lugo, 8,000; Vigo, 6,000; Orense, 5,000; Pontevedra, 4,200.

was very indifferently attended to. Ignorance was universal, more especially at the universities, where science was held in derision.

The great events in the beginning of the nineteenth century have roused the Spaniards from their torpor, and the country, in spite of temporary checks, has increased in population and wealth. Labour is more highly respected now than it was formerly, and whilst monasteries and convents have been emptied, the factories are crowded with workmen. For much of this progress Spain is indebted to foreigners. Millions have been invested by them, and, though the expected profits have scarcely ever been realised, the country at large has permanently profited from this inflow of capital. The English have given an immense impetus to agriculture by buying the wines of Andalusia, the corn and flour of the Castilians, and the cattle of the Galicians. They have likewise developed the mining industry of Huelva, Linares, Cartagena, and Somorrostro. The French have vastly aided the manufacturing industry. Foreign capitalists and engineers have established steamboat lines and railways. The small towns of the interior are awakening from their lethargy, and modern life is beginning to pulsate through their veins.*

In intellectual matters Spain has made even greater progress. Ignorance is still a great power, especially in the Castiles, where schoolmasters are little respected, populous towns are without libraries, and catechisms and almanacs are the only literature of the peasantry. But the position which Spain now holds in literature and the arts sufficiently proves that the country of Cervantes and Velasquez is about to resume its place amongst the other countries of Europe. In science, however, Spain lags far behind, and Michael Servetus is the only Christian Spaniard whose works mark an epoch in the progress of human knowledge. But the spirit of inquiry at one time alive amongst the Moors of Andalusia may possibly revive amongst their descendants.

It is very much to be desired that intellectual progress should mollify the manners of the people.† It is a scandal that the "noble science of bull-baiting" should still meet with so large a measure of support in Spain. These bull-fights, as well as the cock-fights so popular in Andalusia, are sports unworthy a great nation, and should be put down, just as the *auto-da-fés* have been put down.

Since a generation or two Spain has got rid of most of her colonies, which only

* Of the total area 26·1 per cent. consists of arable land, 2·8 of vineyards, 1·7 of olive plantation, 13·7 of meadows and pasture, 16·3 per cent. of woods; 39·4 per cent. are uncultivated. The total value of agricultural produce is estimated at £80,000,000.

The produce of the mines in 1871 represented a value of £6,271,000.

In 1865 there were enumerated 680,373 horses, 1,020,512 mules, 1,298,334 asses, 2,967,303 heads of horned cattle, 22,468,969 sheep, 4,531,736 goats, 4,531,228 pigs, and 3,104 camels.

The products of manufacture are estimated by Gerrido at 963,480,000. Imports (1871), 422,780,000, (1874) £15,280,000; exports (1871), £17,688,000, (1874) £16,120,000.

Commercial marine (1874), 2,856 seagoing vessels (inclusive of 212 steamers), of 625,184 tons, besides 6,498 lighters (26,000 tons) and 12,000 fishing-boats.

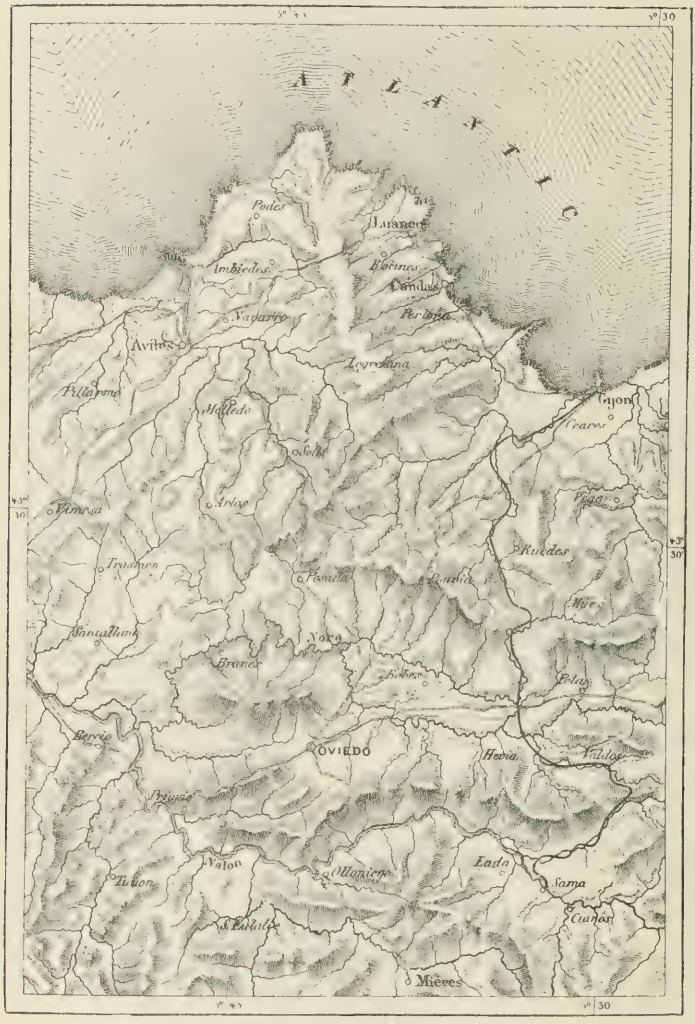
Railways, 3,602 miles in 1876.

† Educational statistics (1870) :—

	Men	Women	Total.
Able to read and write	2,414,000	716,000	3,130,000
Able to read only	317,000	389,000	706,000
Illiterate	5,035,000	6,803,000	11,838,000

hindered her moral and material progress. The metropolis is no longer called

Fig. 185.—Oviedo and Gijon.
Scale 1 : 300 000



upon to uphold slavery, the Inquisition, commercial monopolies, and similar institutions, "devised to insure the happy government of these colonies." These

latter certainly have had their revolutions and counter-revolutions but they have

made some progress in population and wealth. Unfortunately the entire colonial empire was not lost. Cuba and the Philippine Islands are frequently represented

as adding to the wealth of Spain, and large sums have certainly been paid by them into the treasury. But these results have been achieved at the cost of fearful suffering and demoralisation to governors and governed, and unless Spain adopts the colonial system of England, by granting self-government to colonies, it will to a certainty lose the last shreds of its colonial empire, after having exhausted its strength in vain efforts to maintain it.

But though the colonies be lost, the influence of Spain upon the rest of the world will endure for centuries. Spain has impressed her genius upon every

Fig. 187.—Ria de Vigo.

Scale 1 : 250,000.

country subjected at one time or other to her power. Sicily, Naples, Sardinia, and even Lombardy still exhibit traces of Spanish influence in their architecture and customs. In Spanish America we find towns inhabited by Indians which are quite Spanish in their aspect, and almost resemble detached portions of Badajoz and Valladolid. The Indians themselves have adopted the Castilian tongue, and with it Castilian manners and modes of thought. A vast territory, twice the size of Europe, and capable of supporting millions of inhabitants, is occupied now by Spanish-speaking peoples.

X.—Government and Administration.

Since September, 1868, when a revolution upset the Government of Isabella II., Spain has passed through a series of revolutions and convulsions, terminating in December, 1874, in the accession of Alfonso XII., a son of Isabella. Soon afterwards the revolt in the Basque provinces raised by Don Carlos, the "legitimate" king of the country, was suppressed, and the work of internal organization could begin. The legislative power is vested in the King and the Cortes. These latter include a Senate and a House of Deputies. The Senate consists of hereditary

Fig. 188.—Railroads of the Iberian Peninsula.

Scale 1 : 10,000,000.

members (such as royal princes and grandees), of life members chosen by the King, and of senators elected by corporations. The members of the House of Deputies are elected for five years. The President and Vice-President of the Senate are appointed by the King, who enjoys the right of dissolving the Cortes on condition of fresh elections being ordered within three months.

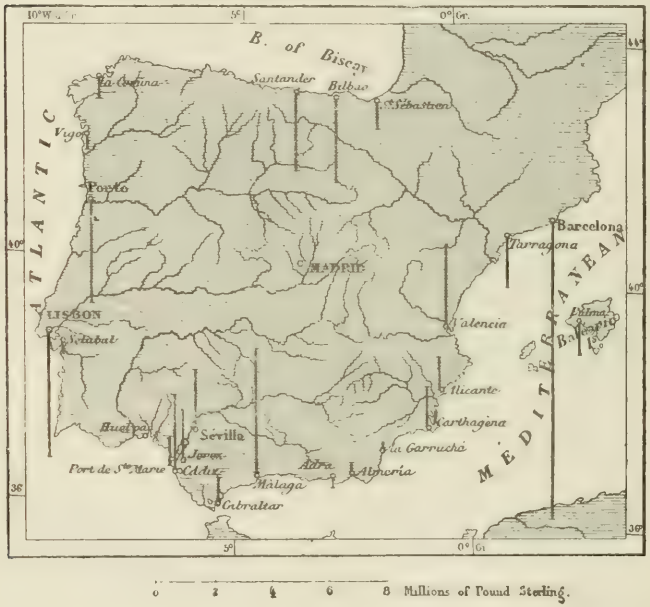
These governmental revolutions scarcely affected the administration of the country. The treasury is always empty, the annual receipts do not suffice to pay the interest upon the national debt, taxes have increased, the conscription demands more men than ever, and the schools diminish in numbers.*

* Revenue (1876-7), £26,300,069: estimated expenditure, £26,251,518, of which more than half is for army and navy; national debt, £420,322,000.

The political and administrative divisions of the country have remained the same since 1841. Spain is divided into forty-nine provinces, including the Canaries. Each province is subdivided into districts, and has its civil governor. The communes are governed by an *alcalde*, or mayor, assisted by an *ayuntamiento*, or municipal council, of from four to twenty-eight members. The judicial administration is modelled on that of France. There are 9,400 justices of the peace (one for each commune), about 500 inferior courts, 15 courts of appeal, and a supreme court sitting at Madrid.

For military purposes continental Spain is divided into twelve districts, each

Fig. 189.—Foreign Commerce of the Iberian Peninsula.



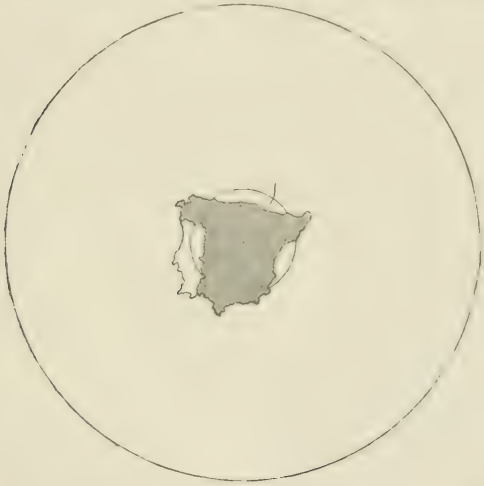
under a captain-general. These are New Castile, Catalonia, Aragon, Andalusia, Valencia with Murcia, Galicia, Granada, Old Castile, Estremadura, Burgos, Navarra, and the Basque provinces. The Balearic Isles, the Canaries, Cuba, Puerto Rico, and the Philippines constitute five additional districts. Military service is compulsory, but substitutes are admitted on payment of a heavy ransom. The annual levy varies exceedingly, and as many as 80,000 men are officially stated to have been levied in a single year, though 60,000 would appear to be the utmost the population can supply. The term of service is seven years in the cavalry and artillery, eight years in the infantry, of which three are passed in the "provincial militia." About 100,000 men are supposed to be actually under arms in the

peninsula, 130,000 are on furlough, and 70,000 men are stationed in the colonies, mostly in Cuba, where about one-fourth of the total strength perish annually.

The principal fortresses are St. Sebastian, Santoña, and Santander, on the Bay of Biscay; Ferrol, La Coruña, and Vigo, on the rias of Galicia; Ciudad Rodrigo, on the Portuguese frontier; Cádiz and Tarifa, at the entrance of the Strait of Gibraltar; Malaga, Cartagena, Alicante, and Barcelona, on the Mediterranean; Figueras, Pamplona, and Zaragoza, at the foot of the Pyrenees.

The navy consists of 123 steamers, propelled by engines of 24,694 horse-power, armed with 755 guns, and manned by 14,000 sailors and 5,500 marines. Six of these vessels are ironclad frigates. The number of superior officers is exceedingly large, and their salaries weigh heavily upon the treasury.

Fig. 190.—Diagram exhibiting the Extent of the Castilian Language.
Scale 1 : 4,000,000.



Officially the privileges of the nobility have been abrogated. The number of "noblemen" is, perhaps, larger in Spain than anywhere else in Europe, for the population of entire provinces, such as the Vascongadas and the Asturias, claims to have "blue blood" in its veins. In 1787 no less than 480,000 "gentlemen" were enumerated, not including minors, and if the proportion is the same now, there must exist at the least 3,000,000 Spaniards who claim to be *hidalgos*, or "sons of somebody." About 1,500 grandees are privileged by custom to remain covered in the presence of the King, and about 200 of these belong to the highest rank. All of these do not, however, owe their rank to birth, for many plebeians, taking advantage of the financial miseries of the country, have succeeded in getting themselves ennobled. The order of the Golden Fleece, founded in 1431 by Philip the Good, is one of the distinctions most coveted by princes and diplomatists.

The Roman Catholic religion is that of the State, and its prelates enjoy great privileges, but all other confessions are supposed to be tolerated. The schools, unfortunately, still remain in the hands of ecclesiastics, who likewise exercise a censorship with respect to pieces to be produced on the stage. Formerly Spain was the most priest-ridden country in Europe. At the close of last century there were 144,000 priests, 71,000 monks, and 35,000 nuns, but only 34,000 merchants. War and revolutions played havoc with the conventual institutions, but as recently as 1835 they still harboured 50,000 inmates. Subsequently the whole of them were suppressed, and in 1869 the last Spanish monk retired from the Carthusian monastery of Granada to find a refuge in Belgium. Since then, however, the laws of the land have again been relaxed in favour of monks and priests. There are 9 archbishops and 54 bishops.

AREA AND POPULATION OF SPAIN AND ITS COLONIES.

	Area. Sq. m.	Population (1870).	Density.
NEW CASTILE (Castilla):—			
Madrid	2,997	487,482	162
Toledo	5,586	342,272	61
Guadalajara	4,870	208,638	41
Cuenca	6,725	238,731	35
Ciudad Real	7,810	264,649	34
OLD CASTILE:—			
Santander	2,113	241,581	114
Burgos	5,650	353,560	62
Logroño	1,945	182,941	94
Ávila	2,981	175,219	60
Segovia	2,714	150,812	53
Sória	3,836	158,699	41
Palencia	3,126	184,668	59
Valladolid	3,043	242,384	80
LEON:—			
Salamanca	4,940	280,870	57
Zamora	4,135	250,968	61
Leon	6,167	350,992	56
ESTREMADURA:—			
Cáceres	8,013	302,455	34
Badajoz	8,687	431,922	49
ANDALUSIA:—			
Almeria	3,302	361,553	110
Cádiz	2,809	426,499	152
Córdova	5,190	382,652	73
Granada	4,937	485,346	98
Huelva	4,122	196,469	48
Jaen	5,184	392,100	75
Málaga	2,824	505,010	180
Seville	5,295	515,011	97
VALENCIA:—			
Castellon de la Plana	2,446	296,222	121
Valencia	4,352	665,141	153
Alicante	2,098	440,470	210
MURCIA:—			
Albacete	5,972	220,973	37
Murcia	4,478	439,067	98
BALEARIC ISLES:—			
Baleares	1,860	289,225	155
CATALONIA (Cataluña):—			
Lérida	4,775	330,348	69
Gerona	2,272	325,110	143
Barcelona	2,985	762,555	256
Tarragona	2,451	350,395	143
ARAGON:—			
Huesca	5,878	274,623	47
Zaragoza (Saragossa)	6,607	401,894	61
Teruel	5,491	252,201	46
NAVARRA AND BASQUE PROVINCES (Vascongadas):—			
Navarra	4,046	318,687	80
Vizcaya (Biscay)	849	187,926	221
Guipúzcoa	728	180,743	248
Alava	1,205	103,320	86
ASTURIAS:—			
Oviedo	4,091	610,883	152
GALICIA:—			
Orense	2,739	402,796	147
Pontevedra	1,739	480,145	282
La Coruña	3,079	630,504	210
Lugo	3,787	475,836	126
TOTAL SPAIN	192,959	16,835,506	87
AFRICA:—			
Canaries	2,808	283,859	101
West Coast	850	35,000	41
AMERICA:—			
Cuba	45,983	1,400,000	30
Puerto Rico	3,596	625,000	173
OCEANIA:—			
Philippines	65,870	6,000,000	91
Carolinas	534	18,800	35
Pelew Islands	345	10,000	29
Marianas	417	8,000	19
TOTAL COLONIES	120,403	8,380,659	70
SPAIN AND COLONIES	313,362	25,216,165	80

PORTUGAL.*

I.—General Aspects.

PORTUGAL, one of the smallest states of Europe, was nevertheless during a short epoch one of the most powerful.

It might appear at the first glance that Portugal ought to be a member of a state including the whole of the Iberian peninsula; but it is neither to chance nor to events purely historical that Portugal owes its separate existence. The country is one by its climate, fauna, and vegetation, and the inhabitants dwelling within it naturally adopted the same sort of life, nourished the same ideas, and joined in the same body politic. It was by advancing along the coast, from river to river, from the Douro to the Minho and Tejo, from the Tejo to the Guadiana, that Portugal constituted itself an independent state.

Soil and climate mark off Portugal very distinctly from the rest of the Iberian peninsula. Speaking generally, that country embraces the Atlantic slopes of the plateau of Spain, and the limit of the heavy rains brought by westerly winds coincides very nearly with the political boundary between the two countries. On one side of the line we have a humid atmosphere, frequent rains, and luxuriant forests; on the other a brazen sky, a parched soil, naked rocks, and treeless plains. These abundant rains convert the feeble streams flowing from the plateau into great rivers. The natural obstacles, such as rapids, which obstruct the principal amongst them, are met with near the political frontier of the country. The harbour of Lisbon was the kernel, as it were, around which the rest of the country has become crystallized. Its power of attraction proved equal to that which caused the rest of the peninsula to gravitate towards Madrid and Toledo.

As frequently happens where neighbouring nations obey different laws and are made to fight each other at the caprice of their sovereigns, there is no love lost between Spaniards and Portuguese. The former, being the stronger, sneer at "Portugueses pocos y locos" (small and crack-brained). The Portuguese are far more demonstrative in giving expression to their aversion. Formerly "Murderer

* Link und Hoffmannsegg, "Voyage en Portugal;" Minutoli, "Portugal und seine Kolonien;" Vogel, "Le Portugal et ses Colonies;" Lady Jackson, "Fair Lusitania;" Latouche, "Travels in Portugal."

of the Castilians" was a favourite sign-board of houses of entertainment, and the national poetry breathes passionate hatred of the Spaniard. This animosity must interfere with the Iberian union, advocated only by a handful of people.

Ancient Lusitania was inhabited by Celtic and Iberian tribes, who resisted for a considerable time the conquering arms of Rome. Those dwelling near the coast had been subjected to the influence of Greek, Phœnician, and Carthaginian colonists; but the influence exercised by the Romans, who forced their language and form of government upon the people, was far more durable. Suevi and

Fig. 191.—Rainfall of the Iberian Peninsula.
According to Jelinek and Hann. Scale 1 : 10,300,000.

Visigoths have left but few traces of their presence. The Mohammedans of various races have largely modified the blood and manners of the inhabitants, especially in Algarve, where they maintained themselves to the middle of the thirteenth century. The numerous ruins of fortresses existing throughout the country bear witness to the severe struggles which took place between these races before uniformity of government and religion was established.

The Kings of Portugal, taking the advice of the Inquisition, expelled all heretics. The persecution of the Moors was pitiless, but the Jews were occasionally granted a respite. The Spanish Jews settled near the frontier, having outwardly embraced

the Christian religion, were permitted to remain, but the more conscientious Jews kept true to their faith, and carried the knowledge they possessed to other countries of Europe and to the East. At the time of their exile they were engaged in literature, medicine, and law, as well as in commerce; at Lisbon they had founded an academy of high repute: it was a Jew who introduced the art of printing into Portugal; and Spinoza, that noble and powerful thinker, was a Jew of Portuguese extraction.

But the Portuguese have not only the blood of Arabs, Berbers, and Jews in their veins, they are likewise much mixed with negroes, more particularly in the south and along the coast. The slave trade existed long before the negroes of Guinea were exported to the plantations of America. Damianus a Goes estimated the number of blacks imported into Lisbon alone during the sixteenth century at 10,000 or 12,000 per annum. If contemporary eye-witnesses can be trusted, the number of blacks met with in the streets of Lisbon equalled that of the whites. Not a house but had its negro servants, and the wealthy owned entire gangs of them. The immunity of Portuguese immigrants who face the deadly climates of the tropics is sometimes ascribed to this infusion of negro blood, but erroneously as we think. Most of these immigrants come from the mountains of the north, where the race is almost pure; and if the Portuguese become acclimatized more rapidly than individuals of other nations, they owe it to their sobriety.

At the present day it is the Galicians who exercise most influence upon the population of Lusitania. They immigrate in large numbers to Lisbon and other towns, where they gain their living as bakers, porters, doorkeepers, and domestic servants. Being ridiculed on account of their uncouth language and rustic manners, they mix but little with the rest of the population. Their numbers, however, are ever increasing, and their thrift and industry soon place them in a position of ease.

The mixture of these diverse elements has not produced a handsome race. The Portuguese possess but rarely the noble mien of the Spaniard. Their features, as a rule, are irregular, the nose is turned up, and the lips are thick. Cripples are rare amongst them, but so are tall men. Squat and short, they are inclined to corpulency. The women cannot boast the fiery beauty of the Spaniards, but have brilliant eyes, an abundance of hair, animated features, and amiable manners.

Travellers speak highly of the manners, civility, and kindness of the peasantry not yet contaminated by commerce. The cruelties committed by Portuguese conquerors in the Indies and the New World have given the nation a bad reputation, though, as a rule, the Portuguese has compassion for all sorts of suffering. He is a gambler, but never quarrels; he is fond of bull-fights, but takes care to wrap up the bull's horns in cork, in order that the animal may be saved for future contests; and he is exceedingly kind to domestic animals. In their intercourse the Portuguese are good-tempered, obliging, and polished. To tell a Lusitanian that he has been "brought up badly" is to offend him most seriously. Their oratory is elegant, though ceremonious. Even the peasants express themselves with a facility and command of words remarkable in a people so badly educated. Oaths

and indecent expressions scarcely ever pass their mouth, and, though great talkers,

Fig. 192.—Portuguese Types: Peasant of Ovar; Woman of Leça; Peasant Woman of Affife.

and even boasters, they are most guarded in their conversation. Portugal has

produced great orators, and one of her poets, Camões, is amongst the most illustrious the world has ever seen. On the other hand, Portugal has given birth to no great artist, for Gran Vasco is a mythical personage. Camões himself avows this when he says, "Our nation is the first because of its great qualities. Our men are more heroic than other men; our women better-looking than other women; and we excel in all the arts of peace and war, excepting in the art of painting."

Portuguese is very much like Castilian as far as root-words and general construction are concerned, but is far less voluminous and sonorous. Nasal and hissing sounds, which a foreigner finds it difficult to pronounce, abound, but there are no gutturals. Arab words are less numerous in Portuguese than in Castilian, but the Lusitanians, as well as the Spaniards, still swear by the god of the Mohammedans—*Oxala* (*Ojalá*); that is, "If Allah wills it."

The Portuguese cannot compare in numbers with the other nations of Europe, and their influence upon the destinies of the world is consequently small. At one time of their history, however, they surpassed all other nations by their maritime enterprise. The Spaniards certainly shared in the great discoveries of the fifteenth century, but it was the Portuguese who made them possible by first venturing to navigate the open ocean. It was a Portuguese, Magalhães, who undertook the first voyage round the world, terminated only after his death. A similar pre-eminence amongst nations will never be met with again, for the increased facilities of communication exercise a levelling influence upon all. Portugal, therefore, can never again hope to resume the national status which she held formerly, but her great natural resources and favourable geographical position at the extremity of the continent must always insure her an honourable place amongst them.

II.—Northern Portugal. The Valleys of the Minho, Douro, and Mondego.

The mountains of Lusitania are a portion of the great orographical system of the whole peninsula; but they are not mere spurs, gradually sinking down towards the sea, for they rise into independent ranges; and the individuality of Portugal is manifested in the relief of its soil quite as much as in the history of its inhabitants.

The mountains rising in the north-eastern corner of Portugal, to the south of the Minho, may be looked upon as the outer barrier of an ancient lake, which formerly covered the whole of the plains of Old Castile. From the Pyrenees to the Sierra de Gata this barrier was continuous, and the breaches now existing date only from a comparatively recent epoch, and are due to the erosive action of torrents. The most considerable of these breaches, that of the Douro, could have been effected only by overcoming most formidable obstacles.

The most northern mountain mass of Portugal, that of the Peneda of Gaviciro (4,727 feet), rises abruptly beyond the region of forest, and commands the Sierra Peñagache (4,065 feet) on the Spanish frontier to the east, as well as the hills of Santa Luzia (1,814 feet) and others near the coast. Another mountain mass rises

immediately to the south of the gorge through which the Limia passes after leaving Spain. This is the Serra do Gerez (4,815 feet), a range of twisted, grotesquely shaped mountains, the only counterpart of which in the peninsula is the famous Serranía de Ronda. This range, together with the Larouco (5,184 feet), to the east of it, must be looked upon as the western extremity of the Cantabrian Pyrenees, and like them it consists of granitic rocks.

The flora of these northern frontier mountains of Portugal much resembles that of Galicia, and on their slopes the botanist meets with a curious intermingling of the vegetation of France, and even Germany, with that of the Pyrenees, Biscay, and the Portuguese lowlands. On the southern summits, however, and more especially on the Serra de Marão (4,665 feet), which forms a bold promontory between the Douro and its important tributary the Tamega, and shelters the wine districts of Oporto from north-westerly winds, the opportunities for examining into the arborescent flora are but few, for the forests which once clad them have disappeared. The schistose plateaux to the east of them and to the north of the Douro have likewise been robbed of their forests to make room for vineyards. Most wild animals have disappeared with the forests, but wolves are still numerous, and are much dreaded by the herdsmen. The mountain goat (*Capra ægagrus*), which existed until towards the close of last century in the Serra do Gerez, has become extinct. The Serra da Cabreira (4,196 feet), to the east of Braga, is probably indebted for its name to these wild goats.

If the Serra do Gerez may be looked upon as the western extremity of the Pyrenean system, the magnificent Serra da Estrella (6,540 feet), which rises between the Douro and Tejo, is undoubtedly a western prolongation of the great central range of Spain which separates the plateaux of the two Castiles. These "Star Mountains" are attached to the mountains of Spain by a rugged table-land, or *mesa*, of comparatively small height. The great granitic Serra da Estrella rises gently above the broken ground which gives birth to the Mondego. It can easily be ascended from that side, and is hence known as the *Serra Mansa*, "the tame mountain." On the south, however, above the valley of the Zezere, the slopes are abrupt and difficult of access, and are known for that reason as *Serra Brava;* that is, "wild mountain." Delightful lakelets, similar to those of the Pyrenees and Carpathians, are met with near the highest summit of the range, the Malhão de Serra. The tops of the Serra da Estrella remain covered with snow during four months of the year, and supply the inhabitants of Lisbon with the ice required for the preparation of their favourite sherbet. The orographical system of the Estrella ends with the Serra de Lousão (3,940 feet), for the hills of Estremadura, which terminate in the Cabo da Roca, a landmark well known to mariners, belong to another geological formation, and consist for the most part of Jurassic strata overlying the cretaceous formation.

The mountains of Beira and Entre Douro e Minho are exposed to the full influence of the moisture-laden south-westerly winds, and the rainfall is considerable. The rain does not descend in torrents, as in tropical countries, but pours down steadily. It is more abundant in winter and spring, but not a month passes

without it. Fogs are frequent at the mouths of valleys and along the coast as far south as the latitude of Coimbra. At that place as much as sixteen feet of rain has fallen in a single year, an amount only to be equalled within the tropics.

The humidity of the air accounts for the great equability of the climate of Northern Portugal. At Coimbra the difference between the coldest and warmest month amounts to but 20° F. Frosts are severe only on the plateaux exposed to the north-easterly winds, and the heat becomes unbearable in deep valleys alone, where the air cannot circulate freely.* At Penafiel, where the rays of the sun are

Fig. 136. The Valley of the Lima, or Lima

thrown back by the rocky precipices, the heat is almost that of a furnace. This, however, is an exception, and the climate generally can be described as temperate.

Running water is abundant. Camões has sung the beauties of the fields of Coimbra watered by the Mondego, the charms of cascades sparkling amidst foliage, and the purity of the springs bursting forth from rocks clad with verdure. The Vouga, the affluents of the Douro, the Ave, Cávado, and Lima, likewise take their

* Temperature of Coimbra according to Cost[illegible]—Year, 61·1°; winter, 52·2; spring, 63; summer, 68·9; autumn, 62·3; coldest month January, 50·2; hottest month July, 69·4; difference, 19·2 F. Temperature of Oporto according to De Luz, mean of eight years—Year, 60·2; winter, 54·1; spring, 58·6; summer, 69·8; autumn, 61·2; coldest month January, 50·2, hottest month August, 70·3; difference, 20·1 F.

devious courses through smiling landscapes whose beauties are set off by rocks and mountains. The Lima, whose delights might well cause Roman soldiers to forget the rivers of their own country, is the only river of the peninsula still in a state of geological transition. All others have drained the lakes which gave birth to them, but in the case of the Lima that old lake basin is still occupied by a swamp, known as Laguna Beon, or Antela, the only remains of a mountain-girt inland lake as large as that of Geneva.

Fig. 194.—Dunes of Aveiro.
Scale 1 : 400,000.

The current of the rivers of Northern Portugal is too great to permit of their being utilised as high-roads of commerce. They have ports at their mouths, but the Douro, which drains nearly a sixth of the Iberian peninsula, is the only one amongst them which facilitates access to an inland district. Mariners dread to approach the coast when the wind blows on shore. Between the Minho and Cabo Carvoeiro, a distance of 200 miles, the coast presents features very much like those of the French landes. Its original indentations and irregularities have been obliterated by barriers of sand. The lower valley of the Vouga was formerly an inlet of the sea extending far inland. The basin of Aveiro resembles geologically that of Arcachon. Its waters abound in fish, but the Douro is the southernmost river of Europe visited by salmon. The abundance of life in certain localities of it is figuratively expressed by a Spanish proverb, which says, "The water of the Douro is not water, but broth."

The rectilinear beach of Beira-mar is lined for the most part with dunes, the old gulfs behind which are gradually being converted into insalubrious swamps, fringed by heath, ferns, strawberry-trees, and broom, whilst the neighbouring forests consist of oaks and pines. Formerly these dunes invaded the cultivated portions of the country, as they still do in France, where like geological causes have produced like results. But long before a similar plan was thought of in France these Portuguese dunes were planted with pines, and as early as the reign of King Diniz "the Labourer," at the beginning of the fourteenth century, they had ceased to "march."

The population of the cultivable portions of the basins of the Minho and Douro is very dense, and in order to maintain themselves the inhabitants are forced to work zealously. Their country is the most carefully cultivated of the peninsula. In a large measure this industry is due to the fact of the peasantry being the owners of the land they cultivate, or at least *affaraõs*—that is, copyholders—who only pay a few shillings annually to the lords of the manors. Many of the peasants are wealthy, and the women are fond of loading themselves with jewellery, amongst which necklaces made in the Moorish taste are most prominent. The cultivation of the fields is attended to with scrupulous care; and the most ingenious methods are employed for the irrigation of the upper slopes of the hills, which are frequently cut up into terraces, or *geios*. These Northern Portuguese are as distinguished for moral excellence as they are by industry. Their sweetness of disposition, gaiety, and kindliness are the theme of universal praise, and as regards their love of dancing and music they are veritable Theocritan shepherds. Challenges in improvised verses form one of the amusements of young men. Nor is the population devoid of physical beauty. The women of Aveiro, though often enfeebled by malaria, have the reputation of being the prettiest in all Portugal.

The cultivation of the vine and the making of port wine constitute the principal branch of industry of the country. The chief vine-growing district, ordinarily known as *Paiz do Vinho*, lies to the north of the Douro, between the Serra de Marão and the Tua, and is exposed to the full force of the rays of the summer sun. In the middle of the seventeenth century the cultivation of this district had hardly begun. The English had not then learnt to appreciate these growths, and were content with the various Portuguese wines shipped from Lisbon. It was only after the treaty concluded by Lord Methuen in 1702 that the cultivation of the vine assumed certain dimensions in the district of the Douro, and ever since the reputation of port has been on the increase. The Marquis of Pombal founded a company for the production of wine, and the small town of Pezo da Regoa, on the Corgo, then became famous for its wine fairs, at which fortunes were lost and won, and a town of wine cellars and stores sprang up opposite the town of Porto, or Oporto, near the mouth of the Douro. For more than a hundred years port and sherry have kept their place on the tables of English gentlemen, and nearly all the wine produced on the banks of the Douro finds its way to England or to British colonies. Indeed, up to 1852 the best quality, known as "factory wine," could be exported to England alone. Next to the English the Brazilians are the best customers of Oporto: they receive nearly 1,000,000 gallons of wine annually.*

The breeding of mules and fattening of Spanish cattle for the London market yield considerable profit. Early vegetables are forwarded not only to London, but also to Rio de Janeiro. Manufactures were already of some importance in the

* Production of wine in Portugal before the appearance of oïdium, in 1853, 105,600,000 gallons. Average annual produce of the vineyards of Alto-Douro (Oporto) in 1848, 11,726,000: in 1870, 11,574,000 gallons. Exports to England, 3,718,000 gallons; Brazil, 994,000 gallons. In 1874 Oporto alone exported 6,623,000 gallons, or more than ever before.

Middle Ages, and have recently been much developed by enterprising English capitalists. Oporto has cotton, linen, silk, and woollen mills, foundries and sugar refineries, and its jewellers and glove-makers enjoy a good repute. But agriculture, industry and legitimate commerce, and even the smuggling carried on in the frontier district of Bragança do not suffice to support the ever-increasing population, and thousands emigrate annually to Lisbon and Brazil.

Northern Portugal may be described as the cradle of the existing kingdom, and it was Porto Cale, on the site of Villanova de Gaia, the southern suburb of Oporto, which gave a name to all Lusitania. At Lamego, to the south of the Douro, the Cortes met, according to tradition, in 1143, and constituted the new kingdom of which Oporto became the capital. When the country recovered its independence after the short dominion of Spain, the Dukes of Bragança were

Fig. 195.—Oporto and the Paiz do Vinho.
Scale 1 : 1,000,000.

invested with the regal power. Though Lisbon occupies a more central position than Oporto, the latter frequently takes the initiative in political movements, and the success of any revolution is said to depend upon the side taken by the energetic population of the north. If we may accept the estimate of the *Portuenses*, they are morally and physically the superiors of the *Lisbonenses*. They alone are the true sons of the great people whose vessels ploughed the ocean during the age of discoveries, and there can be no doubt that their gait is more determined, their speech and their glance more open, than those of the inhabitants of the capital. In vulgar parlance, people of Oporto and Lisbon are known as *tripeiros* and *alfasinhos;* that is, tripe and lettuce eaters.

Porto, or O Porto, the "Port" *par excellence,* is the natural capital of Northern Lusitania, the second city of Portugal on account of its population and commerce, the first in manufactures. As seen from the banks of the Douro, here hardly

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more than 200 yards in width, and spanned by a magnificent railway bridge, it rises like a double amphitheatre, whose summits are crowned by the cathedral and the belfry *dos Clerigos*, and the narrow valley separating them covered with houses. The lower town has broad streets, intersecting each other at right angles, but the streets climbing the hills are narrow and tortuous, and even stairs have frequently to be ascended in order to reach the more elevated quarters of the town. Cleanliness is attended to throughout, and the citizens are most anxious in that respect to insure the praises of their numerous English visitors. Gaia, a long suburb, occupies the opposite side of the river. It abounds in factories and store-houses, and its vast cellars are stated on an average to contain 80,000 pipes of wine. Beautiful walks extend along the river bank and its terraces, and the long reaches of the stream are covered with shipping, and fringed with gardens and villas. The hills in the distance are crowned with ancient convents, fortifications, and villages half hidden amongst verdure. Avintes, famous for the beauty of its women, who supply the town daily with *broa*, or maize bread, is one of them. Suburbs extend along both banks of the river in the direction of the sea. The river at its mouth is only two fathoms in depth during low water, and dangerous of access when the wind blows from the west. Even at Oporto vessels of 400 or 500 tons are exposed to danger from sudden floods of the river, which cause them to drag their anchors. The port of the Douro has therefore to contend with great difficulties in its rivalry with Lisbon.*

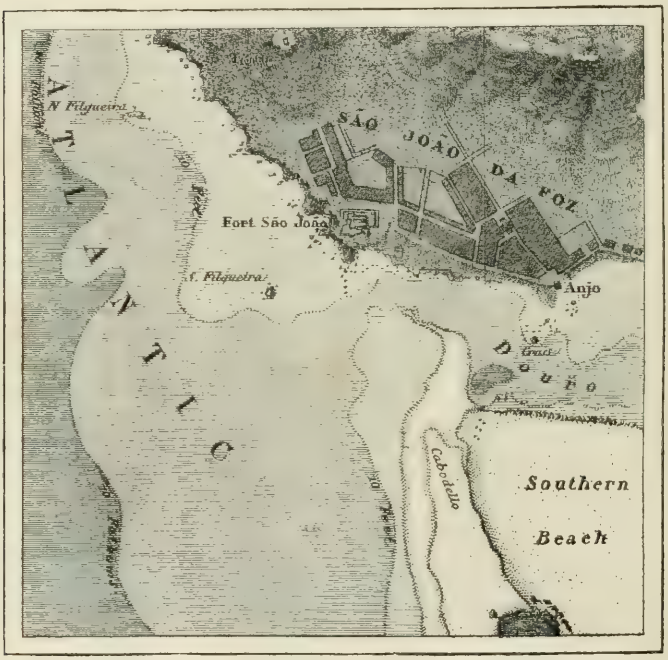
The small town of São João da Foz, at the mouth of the Douro, has a light-house, but carries on no commerce. Near it are Mattozinhos and Leça, the latter of which boasts of an ancient monastery resembling a fortress, and is much frequented on account of its fine beach and refreshing sea breezes. Espinho, to the south of the Douro, is another favourite seaside resort, in spite of the all-pervading smell of sardines. The small ports to the north of the Douro are frequented only by coasting vessels or by seaside visitors. The entrance to the Minho is defended by the castle of Insua, on a small island, as its name implies, and by the insignificant fortress of Caminha. The river is accessible only to vessels drawing less than six feet. The mouth of the Lima, though even more difficult of access, is nevertheless occupied by a town of some importance—coquettish Vianna do Castello, beautifully ensconced amidst the verdure of its fertile plain. Other towns are Espozende, at the mouth of the Cávado, and Villa do Conde, at that of the Ave. Formerly most of the vessels engaged in the slave trade and those employed in the great maritime enterprises of the Portuguese were built here, and it still boasts of a few ship-yards.

Amongst the inland towns of Entre Douro e Minho are Ponte de Lima, famous for the beauty of the surrounding country; Barcellos, overhanging the shady banks of the Cávado; and Amarante, celebrated for its wines and peaches, and proud of a fine bridge spanning the Tamega. But the only towns important on account of their population are Braga and Guimarães, both placed on commanding heights overlooking a most fertile country. Braga (Bracara Augusta), an ancient Roman colony, the capital of the Galicians, then of the Suevi, and later on the residence of

* Imports and exports about £1,000,000.

the Kings of Portugal, became the primatial city of the whole of the peninsula when the two kingdoms were temporarily united under the same sovereign. But Braga is not only a town of the past, it is even now a bustling place, where hats, linens, arms, and beautiful filigree are manufactured for exportation to the rest of Portugal and the Portuguese colonies. Guimarães is equally as interesting as Braga on account of its monuments and mediæval legends. Visitors are still shown the sacred olive-tree which sprang from a seed placed in the soil by King Wamba, when still a common labourer; and Affonso, the founder of the Portuguese

Fig. 196.—São João da Foz and the Mouth of the Douro.



monarchy, was born in the old castle. Guimarães is a busy manufacturing town; it produces cutlery, hardware, and table-linen, and English visitors never fail to purchase there a curiously ornamented box of prunes. Near it are much-frequented sulphur springs, known to the Romans as *Aquæ Levæ*. But the most famous mineral springs of modern Portugal are the Caldas do Gerez, in a tributary valley of the Upper Cávado.

The towns of Traz os Montes and Beira Alta are too far removed from high-ways to have attracted a considerable population. Villa Real, on the Corgo, is the busiest place of Traz os Montes, owing to the vineyards in its neighbourhood.

Chaves, an old fortress near the Spanish frontier, boasts of one of those Roman bridges which have rendered the century of Trajan famous: it was formerly noted for its mineral springs (*Aquæ Flaviæ*). Bragança, the old provincial capital, has a commanding citadel, and, owing to its geographical position, is an important place for smugglers, the legitimate exports fluctuating regularly with the customs' tariff. It is the most important place in Portugal for the production of raw silk. Lamego, a picturesque town to the south of the Douro, opposite the Paiz do Vinho, enjoys a great reputation for its hams; Almeida, which keeps in check the garrison of Spanish Ciudad Rodrigo, was anciently one of the strongest fortresses of Portugal; and Vizeu is an important station between the Douro and the Mondego. Its fairs are more frequented than any others in Portugal, and in its cathedral may be seen the famous masterpiece painted by the mythical Gran Vasco. The herdsmen around Vizeu are noted for their strength and beauty. Their uncovered heads and bare legs give them an appearance of savagery, but their manners are as polished and dignified as those of the rest of their countrymen.

Coimbra (*Æminium*), in Beira-mar, is the most populous town between Oporto and Lisbon. It is known more especially for its university, whose professors and students impart to it the aspect of a mediæval seat of learning. The purest Portuguese is spoken there. The environs are delightful, and in the botanical garden the plants of the tropics mingle with those of the temperate zones. From the banks of the Mondego, upon which the city is built, visitors frequently ascend to the *Quinta das Lagrimos* ("house of tears"), the scene of the murder of the beauteous Inez de Castro, whose death was so cruelly revenged by her husband, Peter the Judge.

Few countries in the world can rival the beautiful valley of the Mondego, that "river of the Muses" held dear by all the Lusitanians, because it is the only one which belongs to them exclusively. Condeixa, a town near Coimbra, fully deserves to be called the "Basket of Fruit," for its gardens produce most exquisite oranges. In the north the ruins of the monastery of Bussaco occupy a mountain terrace covered with a dense forest of cypresses, cedars, oaks, elms, and exotic trees. This delightful place and the hot springs of Luso, near it, are a favourite summer residence of the citizens of Lisbon and Coimbra.

Figueira da Foz, the port of Coimbra, is well sheltered, but, like most other ports of Northern Portugal, is obstructed by a bar of sand. It is nevertheless much frequented by coasting vessels, and amongst its exports are the wines of Barraida. Ovar and Aveiro, in the "Portuguese Netherlands," on the banks of a lagoon separated by a series of dunes from the high sea, are the two other ports of this part of the coast. They were important places during the Middle Ages, but the shifting bars, which render access to them difficult, have put a stop to their prosperity. The seamen of these two places have a high reputation for daring. They engage in sardine-fishing, oyster-dredging, and the manufacture of bay-salt.*

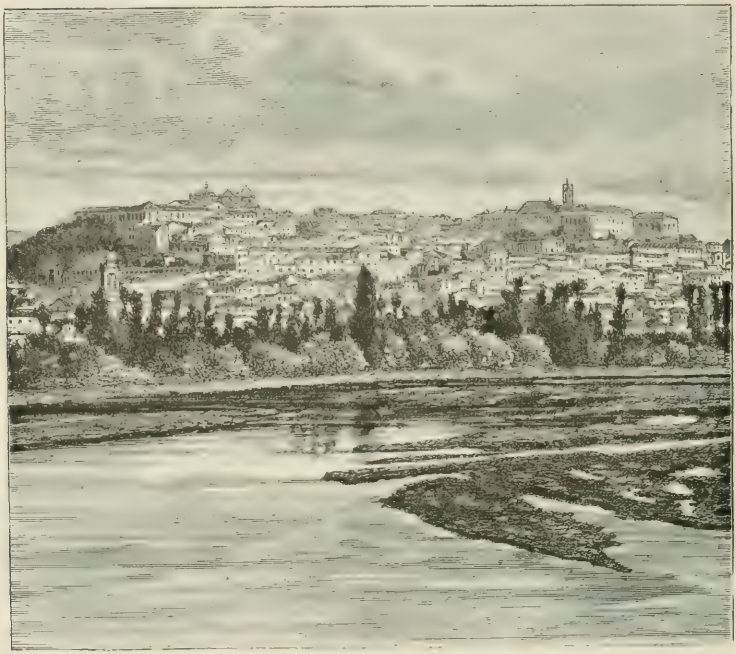
* Towns of over 5,000 inhabitants in Northern Portugal 1864. *Entre Douro e Minho*: Oporto, 86,257; Braga, 19,512; Povoa de Varzim, 10,110; Guimaraes, 7,865; Villanova de Gaia, 7,517; Vianna do Castello, 6,049; Mattozinhos, 5,959. *Traz os Montes*: Chaves, 6,882; Bragança, 5,111; Villa

III.—The Valley of the Tejo (Tagus).

The lower course of the Tejo, called Tajo in Spain, separates Portugal into two portions differing much in their general aspect, climate, and soil. The valley itself is a sort of intermediary between the north and south, and the vast estuary into which the river discharges itself.

Where the Tejo enters Portugal, below the magnificent bridge of Alcántara, it is still hemmed in between precipitous banks, and is neither navigable nor available for purposes of irrigation. Having traversed the defile of Villa Velha do Rodão,

Fig. 197.—Coimbra.



its valley gradually widens, and after having received its most considerable tributary, the Zezere, it becomes a tranquil stream, abounding in islands and sand-banks, and is navigable during the whole of the year. Below Salvaterra the river bifurcates, its two branches enclosing the marshy island of Lezirias. The vast estuary which begins below this island is an arm of the sea rather than a river; its waters are saline, and between Sacavem and Alhandra there are salt-

Real, 5,097. *Beira:* Coimbra, 18,147; Ovar, 10,374; Covilhã, 9,022; Lamego, 8,638; Ilhavo, 8,215; Murtoza, 7,666; Vizeu, 6,815; Castello Branco, 6,583; Aveiro, 6,557; Mira, 6,014; Soure, 5,855; Lavos, 5,837; Miranda do Corvo, 5,261; Paião, 5,097.

pans. The Tejo affords one of the most striking instances of a river encroaching upon its western bank, which is steep and hilly, whilst the left bank is low.

The irregular range of hills which forms the back-bone of the peninsula enclosed by the Lower Tejo and the ocean is attached to the mountains of Estrella by a ravined plateau of trifling elevation, crossed by the railway connecting Cantanhede with Santarem. From the summit of the Serra do Aire ("wind mountain," 2,132 feet) we look down upon the verdant valley of the Tejo and the reddish-hued plains of Alemtejo beyond it. Monte Junto (2,185 feet), further south, is another commanding summit. The rocky promontory of Carvoeiro is joined to the main-

Fig. 128.—Estuary of the Tejo (Tagus).
Scale 1 : 850,000.

land by a sandy beach. Upon it stands the little fortress of Peniche, whose inhabitants lead a life of seclusion, and are engaged in the manufacture of lace. A submarine plateau connects this promontory with Berlinga Island, with an old castle now used as a prison, and with the Farilhões, dreaded by mariners.

The hills on the narrow peninsula to the north of Lisbon are of small height, but, owing to their rugged character, they present great obstacles to intercommunication. It was here Wellington constructed the famous lines of Torres Vedras, which converted the environs of Lisbon into a vast entrenched camp. To the south of these rise the beautiful heights of Cintra, celebrated for their palaces, shady valleys, delightful climate, and historical associations. Sheets of basalt,

ejected from some ancient volcano, cover the hills between Lisbon and Sacavem, and the great earthquakes of 1531 and 1755 prove that subterranean forces were then not quite extinct. The second of these earthquakes was probably the most violent ever witnessed in Europe. The very first shock destroyed 3,850 houses in Lisbon, burying 15,000 human beings beneath the ruins; a minute afterwards an immense wave, nearly forty feet in height, swept off the fugitives who crowded the quay. Only one quarter of the town, that anciently inhabited by the Moors, escaped destruction. The Marquis de Pombal erected a gallows in the midst of the ruins to deter plunderers. From the focus of vibration the oscillations of the soil were propagated over an immense area, estimated at no less than 1,000,000 square miles. Oporto was destroyed in part, the harbour of Alvor in Algarve was silted up, and it is said that nearly all the large towns of Morocco tumbled into ruins.

The gully which connects the open ocean with the inland sea of Lisbon, and through which the Tejo discharges its waters, separates the cretaceous hills of Cintra from the isolated Serra da Arabida (1,537 feet), to the west of Setúbal, which belong to the same geological formation. These two groups of hills were probably portions of one range at a time when the Tejo still took its course across what are now the tertiary plains of Alemtejo, and reached the sea much farther to the south, through the estuary of the Sado.

Lisbon (Lisboa), though the number of its inhabitants is less than half what it was in the sixteenth century, exhibits no trace of the havoc wrought in 1755. Even the central portions of the town have risen from the ruins, and huge blocks of houses, imposing by their size, if not by their architecture, have taken the places of the older structures. The present city extends four miles along the Tejo, but including its suburbs, between Poco do Bispo and the Tower of Belem, its extent is nine miles. The city stretches inland a distance of two or three miles, and, like Rome, is said to be built upon seven hills. A beautiful promenade connects it with Belem. As seen from the Tejo, or from the hills opposite, Lisbon, with its towers, cupolas, and public walks, certainly presents a magnificent spectacle, and there is some truth in the proverb which says—

> "Que não tem visto Lisboa, Não tem visto cosa boa!"
> ("Who has not seen Lisbon has not seen a thing of beauty.")

Unfortunately the interior of the superb metropolis does not correspond with the imposing beauty of its exterior. Lisbon has a noble square, called Largo do Comercio; it has all the various buildings which one expects to meet with in the capital of a kingdom and an important maritime town; but, with the exception of the chapel of São João Baptista, not one amongst them is remarkable for its architecture. The only important structure outside the city is the famous aqueduct Os Arcos das Agoas, which was built by João V., the *Rei Edificador*, in the beginning of the eighteenth century, and sustained no injury during the earthquake of 1755. On approaching the city it crosses a valley on a superb marble bridge of thirty-five arches, the highest of which is 246 feet in height.

Lisbon is relatively poor in interesting monuments, but few towns can rival it in natural advantages of soil, climate, and geographical position. Its situation is

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most central; its harbour, at the mouth of a navigable river, is one of the most excellent in the world; and its entrance can be easily defended, the principal works erected for that purpose being Fort São Julião and the Tower of Bugio.

Lisbon is important not only as regards Portugal, but also, on account of its position, with reference to the rest of Europe—nay, of the entire world. As long as the Mediterranean was the theatre of human history it remained in obscurity, but no sooner had mariners ventured beyond the columns of Hercules than the beautiful harbour at the mouth of the Tejo became one of the principal points of departure for vessels starting upon voyages of discovery. Lisbon became

Fig. 199.—Peniche and the Berlingas.

Scale 1 : 142,850.

the most advanced outpost of Europe on the Atlantic, for it offered greater facilities than any other port for voyages directed to the Azores, Madeira, the Canaries, and the western coasts of Africa. The achievements of Portuguese mariners have passed into history. Vast territories in every quarter of the globe became tributary to little Portugal, and it needed the epic force of a Camões to celebrate these wonderful conquests.

That age of glory lasted but a short time, for proud Lisbon, which had become known to Eastern nations as the "City of the Franks," as if it were the capital of Europe, lost its pre-eminent position towards the close of the sixteenth century.

Portugal capsized suddenly, like a small barge overcrowded with sails. Crushed by the terrible reign of Philip II., enervated by luxury, and grown disdainful of honest labour, as slaveholders always will, Lisbon was constrained to see much of its commerce and most of its valued colonies pass into the hands of Spaniards and Dutchmen. But, in spite of these disasters, Lisbon is still a commercial port of great importance, although as yet no direct line of railway connects it with Madrid and the rest of Europe. England occupies the foremost position amongst the customers of the town, and the Brazilians, whose severance from the mother country was at first looked upon as an irremediable disaster, follow next.* Spain, though it borders upon Portugal for several hundred miles, scarcely enters into commercial relations with it. Civil wars have, however, driven many Spanish

Fig. 200.—Mouth of the Tejo (Tagus).
Scale 1 : 162,400.

exiles to Lisbon, and these have already exercised a considerable influence upon manners. Formerly only men were to be seen in the streets of Lisbon, the women being confined almost with the same rigour as in a Mohammedan city, but the example set by Spanish ladies has found many imitators amongst their Portuguese sisters. The towns in the immediate vicinity of Lisbon are celebrated for their picturesque beauties.

Portuguese Estremadura, which neither suffers from northern frosts nor from fogs and aridity, can boast of a climate approaching that of the fabled Islands of the Happy. At Lisbon snow, or "white rain," as it is called, falls

* In 1874 Lisbon exported 5,900 tons of potatoes, 447,450 gallons of olive oil, 4,400,000 gallons of wine, 157,200 bushels of salt, 200,000 tons of copper ore, figs, almonds, oranges, &c.: 4,092 vessels entered the harbour.

rarely, but it may be seen glittering on the summits of the Serras da Estrella and de Lousão. Its fall near the sea-coast is looked upon as an evil omen, and a heavy snow-storm, as recently as last century, frightened the inhabitants of Lisbon to such an extent that they fancied the day of judgment had come, and rushed into the churches.

The regular alternation between land and sea breezes is likewise an advantage possessed by the neighbourhood of Lisbon. From the beginning of May throughout the fine season the wind blows from the land in the morning, by noon it has shifted to the south, in the evening it blows from the west and north-west, and during the night from the north. Hence its name of *vento roteiro*, that is, "rotary wind." As to the winds forming part of the regular system of atmospheric circulation, they blow with far less regularity. The polar winds, stopped by the transversal mountain ranges of the country, either follow the direction of the coast or are diverted to the plateaux of Spain, and make their appearance in Portugal as easterly winds. It is these latter which render the summer oppressively hot. At Lisbon the thermometer rises occasionally to 100° F., and in 1798 even 104° were observed. Experience has taught us that although the heat at Rio de Janeiro is in excess of that of Lisbon, the dog-days at the latter place are more unbearable.*

The vegetation of the happy district where the climate of North and South intermingle is twofold in its aspect. The date-palm makes its appearance in the gardens of Lower Estremadura; the dwarf palm grows in the open air along the coast; the agave raises its candelabra-like branches as on the coast of Mexico; the camellias are more beautiful than anywhere else in Europe; and the hedges are composed of prickly cacti (*Nopals*), as in Sicily and Algeria. The fruits of the Mediterranean ripen to perfection; and even the mango of the Antilles, only recently introduced, has found a congenial climate. The oranges are known as *portogalli* in several countries as far as Egypt, as if the inhabitants of Portugal had been the first to whom these golden apples were known; and even the word *chintarah*, or *chantarah*, by which the orange is known in some parts of India, is supposed to be a corruption of the name of the Portuguese town of Cintra.

Belem (Bethlehem) is the nearest of the suburban towns of Lisbon, being separated from it merely by a rivulet named Alcántara, after an old Moorish bridge. It is the first place beheld by a mariner approaching Lisbon, and its square tower, built by King John the Perfect, is seen from afar. It was hence Vasco da Gama started upon the memorable expedition which taught the Portuguese the road to India, and a magnificent monastery, now converted into an educational institution, was built in commemoration of this glorious event.

Oeiras, at the mouth of a small rivulet coming down from the heights of Cintra, defends the entrance to the Tejo by means of Fort São Julião; Carcavellos, noted for its wines, lies farther on; and Cascães, with a small harbour defended by a citadel, brings us to the open ocean. The coast beyond this is protected by

* Mean temperature of July, 90° F.; [illegible] temperature, 75° and 102° F.; [illegible] days, 150.

towers, but there are no inhabitants. The hills of Cintra, however, are one of the most populous districts of the country, and they are much frequented by foreigners. Whether we follow the carriage road or the tramroad from Lisbon, we pass the castles and villas of Bonifica, the royal palace of Queluz, and the country seats of Bellas, the fountain of which supplies the capital with water. Cintra itself is surrounded by hotels and gardens. On a hill to the south of it stands the sumptuous Castle de la Penha, whose eccentricities of architecture are softened down by luxuriant masses of vegetation. Strangers likewise visit the ruins of an old Moorish castle and the caverns of the "Monastery of

Fig. [illegible]. Zones of Vegetation in Portugal.
Scale 1 : [illegible]

Limit of Orange Trees
" of the Rose bay
Limits of Agave & Nopal
Date Trees
[illegible] Miles.

Cork," thus named because its walls are covered with cork as a protection against damp. The prospect from all the surrounding heights is magnificent, and most so from the cliffs terminating in the famous Cabo da Roca, the westernmost point of continental Europe.

The city of Mafra occupies a sterile plateau not far from the seaside resort of Ericeira. Like Cintra, it boasts of an immense palace, the Escorial of the kings of the house of Bragança, now used as a military school. João V., who erected this structure, with its numerous churches, chapels, and cells, expended for that purpose all the coin he could command, and when he died there was not enough money left in the treasury to pay for a mass for the repose of his soul. Far more

curious than this immense barrack, with its 5,200 windows, is the forsaken monastery of Alcobaça, about sixty miles farther north, which was built in the twelfth century to commemorate the victories over the Moors. Near it stands the monastery of Batalha, which recalls the defeat of the Castilians in the plain of Aljubarrota in 1385. The portals, cloisters, chapel, and chapter-room abound in sculptures of marvellous finish, though of doubtful taste.

Leiria, the town nearest to Batalha, occupies a fine site at the confluence of the

Fig. 202.—Castle de la Penda de Cintra.

rivers Liz and Lena, and is commanded by a Moorish castle, the old residence of King Diniz the "Labourer," who planted the *pinhal* of Leiria, the finest forest in Portugal. After a long period of decadence this portion of the country has entered upon a new epoch of activity. At Marinha Grande, near it, there are large glass-works, which communicate by rail with the circular harbour of Concha (shell) de São Martinho.

Thomar, formerly famous on account of its monastery, stands on the eastern

slope of the hills commanding the plains of Batalha and Alcobaça. It is the capital of the Knights of Christ, to whom was conceded the privilege of conquering the Indies and the New World. They performed great deeds, but in the end their rapacity led to the decadence of their native country. Thomar is a town of cotton-mills now, but commerce is more active in the places on the Tejo, and notably at Santarem, which, from its "marvellous" hill, looks down upon the verdant isles of the river and the plains of Alemtejo. Santarem and the neighbouring fortress of Abrantes supply Lisbon with vegetables and fruit, and the country around them is a veritable forest of olive-trees.

The sandy soil and shallow rivers bounded by marshes of the country to the south of the Tejo oppose serious obstacles to the establishment of important towns, and if it were not for the vicinity of Lisbon it would probably be uninhabited. Almada, opposite Lisbon, Seixal, Barreiro, Aldea Gallega, and Alcochete are mere suburbs of the capital, and share in its prosperity or adversity. Setúbal, or St. Ives, however, which lies farther to the south, on the estuary of the Sado, and which has an excellent harbour, suffers from too great a proximity to Lisbon, for Portugal is not rich enough to feed two ports so close to each other. Cezimbra, on the steep coast which terminates in Cape Espichel, to the west of Setúbal, is likewise a decayed place, and Troja, which preceded Setúbal as the emporium of the Sado, now lies buried beneath the dunes. Excavations recently made on its site have led to the discovery of Roman mosaics and of a street laid out, perhaps, by the Phœnicians; and Link, the botanist, who visited the spot at the end of last century, still found there the ruined courts of Moorish houses.

Setúbal, though its commercial activity is very much inferior to that of Lisbon, still exports muscat wines, delicious oranges, and salt procured from the ponds in its vicinity.* The sea near Setúbal and Cezimbra abounds in fish and other marine animals, and in comparison with it the Mediterranean and Bay of Biscay may almost be described as deserts. Long before scientific men explored the bottom of the sea the fishermen of Setúbal hauled up from a depth of 300 fathoms immense sharks. Ordinary fish are caught in myriads, and the inhabitants of Cezimbra feed their pigs upon sardines. When Portugal was at the height of its commercial prosperity it supplied a considerable portion of Europe with fish, and almost enjoyed a monopoly in cod, which was exported even to Norway.†

IV.—Southern Portugal. Alemtejo and Algarve.

The mountains beyond the Tejo rarely assume the aspect of chains. For the most part they rise but little above the surrounding plateau. This region is the least attractive of all Portugal, and between the Tejo and the mountains of Algarve there are only plains, monotonous hills, woods, and naked landes. Human habitations are few and far between. The lowlands along the Tejo and

* In 1870 Portugal produced 220,000 tons of salt, of which 184,000 tons were from Setúbal.

† Towns of Estremadura having over 5,000 inhabitants 1864:—Lisbon, 224,668; Setúbal, 13,134; Santarem, 7,852; Torres Novas, 6,878; Caparica, 6,311; Palmella, 5,260; Cezimbra, 5,797; Abrantes, 5,590; Cartaxo, 5,218; Louriçal, 5,182.

the coast are covered with a thick layer of fine sand resting upon clay, and they still exhibit clumps of maritime pines and holm-oaks, the remains of the ancient forests which formerly covered the whole of the country. Farther inland we reach the great landes, or *charnecas*, covered with an infinite variety of plants. There are heaths growing sometimes to a height of six feet, rock-roses, juniper-trees, rosemary, and creeping oaks. But the general aspect of the country is dreary, in spite of the white and yellow flowers which cover it until the middle of winter,

Fig. 203.—Monastery of the Knights of Christ at Thomar.

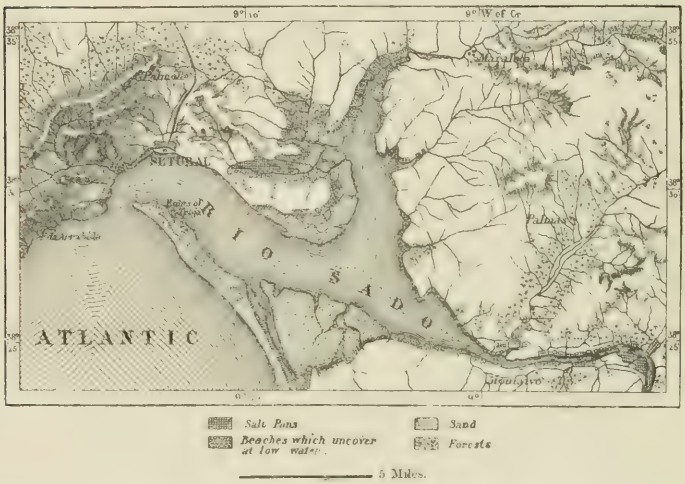
for there are hardly any cultivated fields. The hills consist for the most part of micaceous schists, and are covered with a monotonous growth of labdanum-yielding rock-roses. This is a western extension of the zone of *jarales*, which covers so many hundred square miles of the Sierra Morena and other mountain regions of Spain.

The Serra de São Mamede (3,363 feet), on the confines of Portugal, between the valleys of the Tejo and Guadiana, is the highest mountain mass of Southern Portugal, but its granitic ridges, enclosing narrow valleys between them, hardly

rise 1,500 feet above the general level of the plateau. A second granitic mountain mass rises to the south of the depression crossed by the railway from Lisbon to Badajoz. This is the Serra de Ossa (2,130 feet). An undulating tract of country joins it to other serras, forming steep escarpments towards the valleys of the Guadiana and Sadão, and the monotonous plain known as Campo de Beja (870 feet). The famous Campo de Ourique (700 feet), upon which 200,000 Moors, commanded by five kings, were defeated by the Portuguese in the middle of the twelfth century, forms a southern continuation of that plain. This battle, and the massacres which succeeded it, have converted the plains to the south of the Tejo into deserts.

The hills of that portion of Alemtejo which lies to the east of the Guadiana

Fig. 201.—Estuary of the Sado.
Scale 1 : 550,000.



belong to the system of the Sierra Morena of Spain. The river which separates them from the hills and plateaux of the west is confined in a deep and narrow gorge. At the *Pulo do Lobo* ("wolf's leap") it still descends in cataracts, and becomes navigable only at Mertola, thirty-seven miles above its mouth.

The hills of Southern Alemtejo and Algarve, to the west of the Guadiana, are at first mere swellings of the ground known as *cumeadas*, or "heights of land," but in the Serra do Malhão (1,886 feet) and the Serra da Mezquita they attain some height. A plateau, traversed by the upper affluents of the Mira, joins the range last mentioned to the Serra Caldeirão (1,272 feet), supposed to be named after some ancient crater, or "caldron," which terminates, to the north of Cape Sines, with the Atalaya, or Sentinel (1,010 feet). The principal range continues towards the west, and in the Serra de Monchique (2,963 feet), a mountain mass filling up the

south-western corner of Portugal, it attains its culminating point. A steep ridge, known as Espinhaço de Cão ("dog's back"), extends from the latter in the direction of the Capes of St. Vincent and Sagres.

The latter was selected by Henry the Navigator as the seat of the naval school founded by him, and from its heights he watched for the return of the vessels which he dispatched on exploratory expeditions. Associations such as these are far more pleasurable than those connected with the neighbouring Cape St. Vincent, where Admiral Jervis, in 1797, destroyed a Spanish fleet.

The hills of Sagres are of volcanic origin, and the subsidence of portions of

Fig. 205.—Serra de Monchique and Promontory of Sagres.

Scale 1 : 500000.

the coast of Algarve appears to prove that subterranean forces are still active. Wherever this subsidence has been observed the coast is fringed by sand-banks, thrown up by the waves of the sea, the channel separating them from the mainland being navigable for small vessels.

If a traveller ascend one of the culminating points of the mountains of Algarve, he cannot fail to be struck with the remarkable contrast existing between the districts to the north and south of him. On the one side he looks down upon vast solitudes resembling deserts; on the other he perceives forests of chestnut-trees, numerous villages, towns bordering the seashore, and fleets of fishing-boats rocking upon the blue waves. The contrasts between the inhabitants of these two districts

are scarcely less striking. The inhabitants of Alemtejo are the most solemn of Portuguese, and ever object to dancing. Very thinly scattered over the landes which they inhabit, they either engage in agriculture or follow their herds of pigs and sheep into the forests of holm-oaks and thickets of rock-roses. In summer they cross the Tejo with their pigs, and pasture them in the mountains of Beira. The population of Algarve, on the other hand, is thrice as dense as that of Alemtejo, and not only are fields, vineyards, and orchards carefully tended, but the sea likewise is made to yield a portion of its food. The contrast between the two provinces is partly accounted for by the fact that most of the great battles were fought on the undulating plains of Alemtejo. When the Romans held the country Alemtejo supported a numerous population, as is proved by the large number of inscriptions found.

Differences of altitude and geographical position sufficiently account for the

Fig. 206.—Geology of Algarve.
Scale 1 : 1,500,000.

differences of climate existing between the two provinces. Alemtejo, with its monotonous plains and stunted vegetation, is almost African in its aspect, whilst Algarve, with its forests of olive-trees, groves of date-palms, agaves, and prickly cacti, presents us with tropical features. The mean temperature near the coast is probably no less than 68° F. The Serra de Monchique bars the cool winds of the north, whilst the sandy islands fringing a portion of the coast keep off refreshing sea breezes. The hottest wind of all is that which blows from the east. It is often laden with fever-breeding miasmata, and a proverb says, *De Espanha nem bom vento nem bom casamento :* "Neither good winds nor good weddings are bred in Spain."

Villanova de Portimão, to the south of the Serra de Monchique, has long been looked upon as the hottest place in Europe; there are, however, several localities in Spain which rival it in that respect. Thus much is certain, that Algarve, with

the lower valley of the Guadalquivir and the southern coasts of Andalusia and Murcia, constitutes the most torrid portion of Europe. The Arabs were quite right when they designated Southern Lusitania and the opposite shore of Morocco by the same name of "el Gharb;" that is, the two Algarves, or "eastern districts." Portuguese Algarve, in spite of the conversion of its inhabitants to Christianity, has retained its ancient Moorish name, and the Berber and Semitic blood is very conspicuous there.

In Upper Alemtejo there are but few towns, and these would be altogether insignificant if it were not for the overland commerce carried on with Spain. Crato, which is the most considerable station on the railway which joins the Tejo to the Guadiana, and its neighbour Portalegre, were formerly important stages on the great overland route. Elvas, farther to the south, is surrounded by orchards, and defended by forts which were looked upon in the last century as masterpieces of military architecture. It faces the Spanish fortress of Badajoz, as well as Olivença, which was assigned to Portugal by the treaty of Vienna, but never surrendered by Spain. Estremoz, on a spur of the Serra de Ossa, is famous throughout Portugal for its *bucaros*—elegantly modelled earthen jars which diffuse a sweet odour. Montemor looks down from its hill upon vast landes and monotonous woods. Évora, likewise built on a hill, commands an extensive plain. It was a populous place during the dominion of the Romans, and in the Middle Ages became the second residence of the Kings of Portugal. There exist now only a Roman aqueduct, the ruins of a temple of Venus, Corinthian columns, and the remains of mediæval castles to remind us of its ancient splendours.

Beja, the ancient *Pax Julia* or *Colonia Pacensis* of the Romans, has likewise lost its former importance, but Minas de São Domingos, on the peninsula formed by the confluence of the Guadiana and the Chanza, is rapidly increasing, thanks to its mines of pyrites of copper and other minerals, which are being worked by an English company. The ore is conveyed by rail to Pomarão, on the Guadiana, and thence on barges to Villa Real de Santo Antonio, at its mouth, formerly a mere fishing village, but now a busy port. Castro Marim, where the expeditions against the Moors used to be fitted out, is close to it.

Silves, the ancient Moorish capital of Algarve, lies in the interior of the country, far removed from the present highways of commerce. Faro, the modern capital, has the advantage of lying on the seashore, and of possessing a secure harbour, whence small coasters are able to export fruit, tunny-fish, sardines, and oysters. Tavira possesses the same advantages, and exports the same articles; it is said to be the prettiest town of Algarve. Loulé, in a delightful inland valley, is a pretty place, and, when invalids have learnt the road to Algarve, may obtain some importance as a winter resort. The Caldas (warm baths) de Monchique (600 feet) enjoy a world-wide reputation even now, not only because of their efficacy, but also on account of the delicious climate and charming environs. This district is said to produce the best oranges in Portugal.*

* Towns of Southern Portugal having over [illegible] inhabitants (1864).—*Alemtejo*: Évora, 11,[illegible]; Elvas, 11,086; Estremoz, 7,274; Beja, [illegible]; Portalegre, [illegible]; Serpa, [illegible]; Moura, [illegible]; Castello

V.—The Present and Future of Portugal.

Little Portugal no longer shares with her neighbour, Spain, in the dominion of the world, as in the fifteenth century. The secrecy observed with a view to the retention of the monopoly of trade with countries newly discovered proved in the end most injurious to Portugal. Other nations appeared upon the stage which the Portuguese had dreamt of occupying for ever, and though the latter still hold colonies vastly superior in area to the mother country, this is nothing in comparison with what has been irretrievably lost. Vasco da Gama discovered the ocean high-road to India, but the few settlements which Portugal still holds there she owes to

Fig. 207.—Faro and Tavira.

Scale 1 : 500,000.

the favour of England. In the Malay Archipelago Portugal has been supplanted almost completely by the Dutch, and Macao, at the entrance of the Canton River, was hardly more than a slave market until quite recently, from which Chinese "emigrants" were exported to Peru. In Africa Portugal holds vast possessions, if we are to believe in official documents and maps, but in reality only a very small tract of territory is under the dominion of the Portuguese, and most of the commerce is carried on through Dutch and other foreign houses. As to Brazil, it now surpasses the mother country in population and wealth. Madeira and the

de Vide, 5,285; Campo Maior, 5,277. *Algarve:* Loulé, 12,156; Tavira, 10,903; Faro, 8,361; Lagos, 7,771; Olhão, 7,025; Alportel, 6,043; Villanova de Portimão, 5,531; São Bartholomeu de Messires, 5,318; Monchique, 5,251; Silves, 5,103.

Azores, the first conquests made by Lisbon navigators, are looked upon as integral portions of Portugal; they enjoy the same rights, and are quite equal to it in wealth.*

When Brazil was lost to Portugal that small country found itself in a position of lamentable prostration. Exhausted by foreign and intermecine wars, its finances utterly ruined, and without roads to enable it to export its produce, it might have disappeared from our maps without any interests, except those of a few English vine-growers and Spanish smugglers, being affected. Even in 1851 there only existed a single carriage road in the country, namely, that which connected Lisbon with the royal palace at Cintra. No attention whatever was paid to education, and about a generation ago a girl able to read was a phenomenon. At the same time we must not forget that these illiterate Portuguese knew how to discuss a

Fig. 298.—Geographical Extent of the Portuguese Language.

subject without quarrelling, had great command of their language, and were able even to improvise verses of great poetical merit, in all of which respects they contrasted favourably with the peasantry of Northern Europe.

In the course of the last generation education has made much progress in Portugal;† and in other respects, too, the country has gradually assimilated with the rest of Europe. Roads and railways have been constructed,‡ and the latter connect Lisbon not only with the leading provincial towns, but also with Spain. The commerce with the latter country increases regularly with the occurrence of civil war, when Portugal profits at the expense of the Spanish ports of the Mediterranean.

* For a list of Portuguese [illegible]

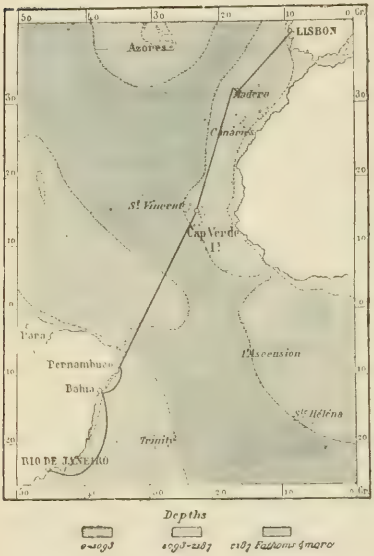
† In 1874 [illegible] a university [illegible]

‡ In 1875, 2,267 [illegible]

Much of the ordinary commerce with Spain never appears in the customs' registries, for it is carried on by smugglers, who glory in evading the vigilance of the frontier police.

The commerce of Portugal has increased very much in the course of the last thirty years. More than half of it falls to the share of Great Britain, a circumstance not to be wondered at when we bear in mind the relative geographical position of the two countries, for Portugal lies upon the direct route followed by English steamers proceeding to the Mediterranean, Western Africa, or Brazil. The assistance which England rendered Portugal during the peninsular war has cemented these commercial bonds.

Fig. 209.—Telegraph from Lisbon to Rio de Janeiro.



The commercial relations with Brazil, now joined to Lisbon by a submarine cable, are likewise the natural result of the relative positions of the two countries and of the common origin of their populations. Portugal, in fact, participates in every progress made by its old colony, and its commerce will assume immense proportions when slavery is abolished in Brazil, when the solitudes of the Amazonas resound with the stir of industrious populations, and the coasts of the Pacific are joined to the Atlantic by means of railways crossing the Andes.*

But, after all, it will be Spain with which the most intimate commercial relations must finally be established, in spite of national prejudices and dynastic interests. The two nations will in the end become one, as the Aragonese and Castilians, the Andalusians and Manchegos, have become one. It is merely a question of time; but who can doubt that community of industrial and social relations will lead to a political union? We only trust that this union may be brought about without a resort to brute force, and with due regard to special interests.

VI.—Government and Administration.

Portugal is an hereditary and constitutional monarchy. In accordance with the Carta de Ley of 1826, as revised in 1852, the King is charged with the executive,

* Value of exports and imports in 1840, £4,016,320; in 1856, £8,127,400; 1875, £12,916,020. The commercial marine consisted in 1875 of 433 vessels (inclusive of 23 steamers), measuring 111,260 tons.

and shares the power of making laws with two chambers. He receives a civil list of £144,000, enjoys the income from certain Crown lands, and possesses magnificent Crown jewels, amongst which the "diamond of Braganza" is the most famous. In default of male heirs the crown descends in the female line. "His most faithful Majesty" still claims to be "King of the two Algarves, Lord of Guinea and of the Conquests." The seven ministers of the Crown are responsible for the King's actions: they may be impeached by the Chamber of Deputies, and are judged by the Chamber of Peers. A Privy Council of an indefinite number of members, appointed for life, advises the King in all questions of administration. The heir presumptive takes part in its deliberations on attaining his eighteenth year.

The Chamber of Peers consists of about a hundred members, some of them hereditary and others appointed by the King. Its meetings are presided over by the Patriarch of Lisbon. The Chamber of Deputies is elective, and the discussion of the budget and granting of supplies are specially reserved to it. All males more than twenty-five years of age are entitled to the franchise if they pay 4s. 6d. in direct taxes, or 22s. from real estate. Graduates of universities, certified teachers, officers, and priests are not required to possess any property qualification, and they, as well as all married men, become enfranchised on completing their twenty-first year. All electors are eligible as deputies if they pay 18s. in direct taxes, or 90s. from real estate. Every 25,000 inhabitants are represented by a deputy. The President of the Chamber is selected by the King from five candidates presented by the deputies. The latter are entitled to remuneration.

For judicial purposes the country is divided into twenty-six districts, or *comarcas*, with eighty-five courts. There are courts of appeal at Lisbon and Oporto, and a supreme court at Lisbon. Parish judges (*juizes ordinarios*), elected by the people, exercise the inferior jurisdiction. Juries give their verdict on questions of fact in civil as well as in criminal cases. The principal codes still in force are the "Codigo Alfonsino" of the fifteenth century, the "Codigo Manoelino" (1514), and the "Codigo Filippino," introduced by Philip IV. of Spain. A Commercial Code was published in 1833.

The Roman Catholic religion is that of the State, but Protestant places of worship are suffered to exist in the seaports. The hierarchy includes a patriarch residing at Lisbon, two archbishops at Braga and Évora, and fourteen bishops. The Inquisition was abolished in 1821, and the monasteries, 750 in number, as well as most of the convents, were suppressed in 1834, and their revenues confiscated for the benefit of the State.

The army numbers 1,650 officers and 38,000 men, of whom about two-thirds are under colours during peace. On a war footing it is to be raised to 2,418 officers and 70,687 men. All men are obliged to serve either in the army or in the reserve, and exemption can no longer be purchased. The fortresses are numerous, but only a few of them are capable of being defended against modern artillery. The most important are Elvas, Abrántes, and Valença, near the Spanish frontier, the fort of São Julião and the citadel of Peniche on the coast. The navy no longer numbers a thousand vessels, as it did when King Sebastian started for

the invasion of Morocco. It consists now of twenty-seven steamers, including an ironclad corvette, and eleven sailing vessels, manned by 3,000 men and armed with 171 guns.

The public revenue approaches £6,000,000 sterling, and ever since 1834 there has been annually a deficit, which has resulted in a national debt of more than £80,000,000, a burden almost too heavy for a small country like Portugal. The revenue is, however, increasing, a balance between income and expenditure has been established within the last year or two, and the wretched expedient of deducting from 5 to 30 per cent. of the salaries of Government officials could be dispensed with for the first time in 1875.

POLITICAL DIVISIONS, AREA, AND POPULATION.

Provinces.	Districts.	Area, Sq. Miles.	Population, 1874.	Density.
Entre Douro e Minho	Vianna	861	221,049	256
	Braga	1,054	346,429	329
	Porto	907	451,212	500
Traz os Montes	Villa Real	1,718	239,591	140
	Bragança	2,573	177,170	—
Beira Alta	Aveiro	1,216	272,763	69
	Vizeu	1,922	398,477	207
Beira Baixa	Coimbra	1,500	305,237	203
	Guarda	2,148	234,912	109
	Castello Branco	2,559	178,703	69
Estremadura	Leiria	1,348	194,944	145
	Santarem	2,651	217,316	82
	Lisbon	2,936	491,205	168
Alemtejo	Portalegre	2,497	109,192	44
	Evora	2,740	112,477	41
	Beja	4,198	154,327	37
Algarve	Faro	1,875	193,877	104
	Continental Europe	34,702	4,298,881	124

COLONIAL POSSESSIONS.

	Area, Sq. Miles.	Population.	Density.
Azores	921	60,072	65
AFRICA:—			
Madeira	310	118,609	383
Cape Verde Island	1,487	90,704	61
Senegambia	27	9,282	344
St. Thome and Principe	417	31,692	75
Fort Ajuda	13	700	54
Angola, Benguela, and Mossamedes	312,000	2,000,000	6
Moçambique and Sofala	40,000	300,000	8
ASIA:—			
Goa, &c.	1,395	474,234	339
Damão	30	40,980	1336
Diu	12	12,303	1025
Timor and Kambing	5,527	250,000	45
Macao	1½	71,834	47·223
Colonies	362,140	3,460,410	10
Total, Portugal and Colonies	396,842	7,759,291	20

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